

=> d his

(FILE 'REGISTRY' ENTERED AT 10:50:47 ON 18 APR 2005)
DEL HIS Y

FILE 'REGISTRY' ENTERED AT 10:53:09 ON 18 APR 2005
ACT GINKO/A

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-----
L1 (      1)SEA FILE=REGISTRY ABB=ON  PLU=ON  "GINKGOLIDE A"/CN
L2 (      1)SEA FILE=REGISTRY ABB=ON  PLU=ON  "GINKGOLIC ACID"/CN
L3 (      1)SEA FILE=REGISTRY ABB=ON  PLU=ON  BILOBALIDE/CN
L4 (      1)SEA FILE=REGISTRY ABB=ON  PLU=ON  "GINKGOLIDE C"/CN
L5 (      1)SEA FILE=REGISTRY ABB=ON  PLU=ON  "GINKGOLIDE B"/CN
L6      5 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5)
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FILE 'HCAPLUS' ENTERED AT 10:53:18 ON 18 APR 2005
SET SFIELD OBI

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L7      2899 S GINKGO
L8      1258 S L7 (L) EXT?
L9      15974 S ULTRAFILTRA?
L10     4 S L8 AND L9
L11     2 S L7 (L) L9
L12     16962 S ULTRAFILT?
L13     4 S L7 AND L12
L14     17699 S TERPENOID# OR TERPENLACTONE?
L15     6700 S FLAVONGLYCOSIDE# OR GLYCOSIDE? (L) FLAVON?
L16     26584 S ULTRAFILTR?/AB
L17     6 S L7 AND (L9 OR L16)
L18     157 S L7 AND L15
L19     7 S L18 AND L14
L20     856 S L6
L21     3 S L20 AND (L9 OR L16)
        SET SFIELD BI
L22     226941 S ( HIGH## (4A) (CONTEN? OR PERCENT? OR AMOUNT? OR AMT#))
L23     58 S L22 AND L7
L24     7 S L23 AND (L14 OR L15)
L25     18 S L24 OR L21 OR L19 OR L13 OR L11 OR L10

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=> fil reg

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 provided by InfoChem.

STRUCTURE FILE UPDATES: 17 APR 2005 HIGHEST RN 848640-07-3
 DICTIONARY FILE UPDATES: 17 APR 2005 HIGHEST RN 848640-07-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when
 conducting SmartSELECT searches.

```
*****
*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*
*****
```

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
 information enter HELP PROP at an arrow prompt in the file or refer
 to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d que 16

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L1 ( 1)SEA FILE=REGISTRY ABB=ON PLU=ON "GINKGOLIDE A"/CN
L2 ( 1)SEA FILE=REGISTRY ABB=ON PLU=ON "GINKGOLIC ACID"/CN
L3 ( 1)SEA FILE=REGISTRY ABB=ON PLU=ON BILOBALIDE/CN
L4 ( 1)SEA FILE=REGISTRY ABB=ON PLU=ON "GINKGOLIDE C"/CN
L5 ( 1)SEA FILE=REGISTRY ABB=ON PLU=ON "GINKGOLIDE B"/CN
L6 5 SEA FILE=REGISTRY ABB=ON PLU=ON (L1 OR L2 OR L3 OR L4 OR L5)
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=> d 16 1-5

```
L6 ANSWER 1 OF 5 REGISTRY COPYRIGHT 2005 ACS on STN
RN 33570-04-6 REGISTRY
ED Entered STN: 16 Nov 1984
CN 4H,5aH,9H-Furo[2,3-b]furo[3',2':2,3]cyclopenta[1,2-c]furan-2,4,7(3H,8H)-
trione, 9-(1,1-dimethylethyl)-10,10a-dihydro-8,9-dihydroxy-,
(3aS,5aR,8R,8aS,9R,10aS) - (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 4H,5aH,9H-Furo[2,3-b]furo[3',2':2,3]cyclopenta[1,2-c]furan-2,4,7(3H,8H)-
trione, 9-(1,1-dimethylethyl)-10,10a-dihydro-8,9-dihydroxy-,
[5aR-(3aS*,5aα,8β,8aS*,9α,10α)]-
CN 4H,5aH,9H-Furo[2,3-b]furo[3',2':2,3]cyclopenta[1,2-c]furan-2,4,7(3H,8H)-
trione, 9α-tert-butyl-10,10aβ-dihydro-8α,9-dihydroxy-,
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(-) - (8CI)

OTHER NAMES:

CN (-)-Bilobalide

CN Bilobalid

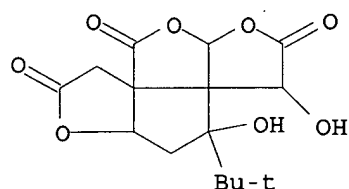
CN **Bilobalide**

MF C15 H18 O8

CI COM

LC STN Files: ADISINSIGHT, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CIN, CSCHM, DDFU, DRUGU, EMBASE, IPA, MEDLINE, PROMT, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL

(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

235 REFERENCES IN FILE CA (1907 TO DATE)

8 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

236 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 2 OF 5 REGISTRY COPYRIGHT 2005 ACS on STN

RN 22910-60-7 REGISTRY

ED Entered STN: 16 Nov 1984

CN Benzoic acid, 2-hydroxy-6-(8Z)-8-pentadecenyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Benzoic acid, 2-hydroxy-6-(8-pentadecenyl)-, (Z)-

CN Salicylic acid, 6-(8-pentadecenyl)-, (Z)- (8CI)

OTHER NAMES:

CN 1-Hydroxy-2-carboxy-3-(pentadecen-8'-yl)benzene

CN 22:1-ω7-Anacardic acid

CN 6-(8Z)-Pentadecenylsalicylic acid

CN 6-(Z)-8-Pentadecenylsalicylic acid

CN Anacardic acid monoene

CN Ginkgoic acid

CN **Ginkgolic acid**

CN Ginkgolic acid I

CN Romanicardic acid

FS STEREOSEARCH

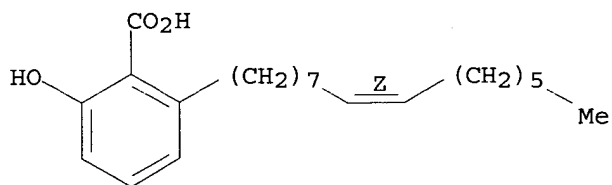
DR 480-48-8

MF C22 H34 O3

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CIN, DDFU, DRUGU, IPA, MEDLINE, NAPRALERT, PROMT, TOXCENTER, USPAT2, USPATFULL

(*File contains numerically searchable property data)

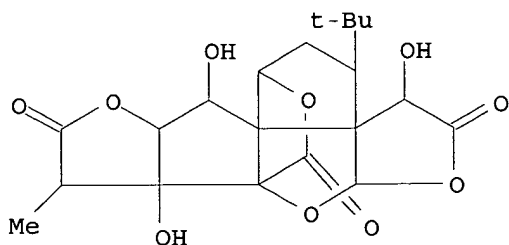
Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

128 REFERENCES IN FILE CA (1907 TO DATE)
 10 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 130 REFERENCES IN FILE CAPLUS (1907 TO DATE)

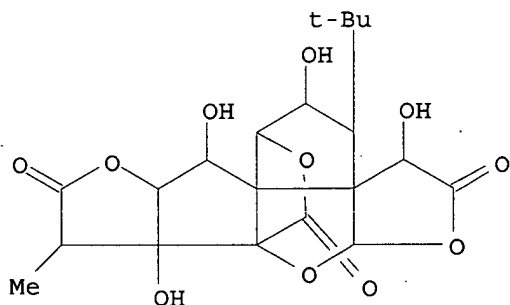
L6 ANSWER 3 OF 5 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 15291-77-7 REGISTRY
 ED Entered STN: 16 Nov 1984
 CN 9H-1,7a-(Epoxyethano)-1H,6aH-cyclopenta[c]furo[2,3-b]furo[3',2':3,4]cyclopenta[1,2-d]furan-5,9,12(4H)-trione, 3-(1,1-dimethylethyl)hexahydro-4,7b,11-trihydroxy-8-methyl-, (1R,3S,3aS,4R,6aR,7aR,7bR,8S,10aS,11R,11aR)- (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN 5H-Dicyclopenta[b,c]furan-3,5a(6H)-diacetic acid, 6-tert-butyl-3a-carboxyhexahydro- α 5a,1,2,3,5,8-hexahydroxy- α 3-methyl-, tri- γ -lactone (8CI)
 CN Ginkgolide A, 1-hydroxy-, (1 β)- (8CI)
 OTHER NAMES:
 CN 9H-1,7a-(Epoxyethano)-1H,6aH-cyclopenta[c]furo[2,3-b]furo[3',2':3,4]cyclopenta[1,2-d]furan-5,9,12(4H)-trione, 3-(1,1-dimethylethyl)hexahydro-4,7b,11-trihydroxy-8-methyl-, [1R-(1 α ,3 β ,3aS*,4 β ,6a α ,7a α ,7b α ,8 α ,10a α ,11 β ,11aR*)]-
 CN BN 52021
 CN BN 52051
 CN **Ginkgolide B**
 FS STEREOSEARCH
 DR 99796-69-7
 MF C20 H24 O10
 CI COM
 LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CIN, CSCHM, DDFU, DRUGU, EMBASE, IMSDRUGNEWS, IMSRESEARCH, IPA, MEDLINE, MRCK*, NAPRALERT, PHAR, PROMT, PROUSDDR, RTECS*, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL
 (*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

616 REFERENCES IN FILE CA (1907 TO DATE)
8 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
617 REFERENCES IN FILE CAPLUS (1907 TO DATE)

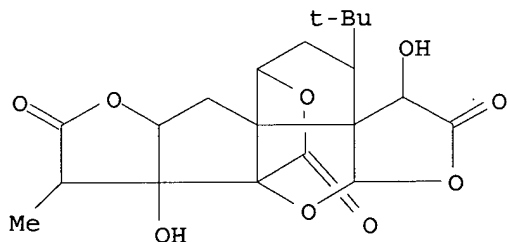
L6 ANSWER 4 OF 5 REGISTRY COPYRIGHT 2005 ACS on STN
RN 15291-76-6 REGISTRY
ED Entered STN: 16 Nov 1984
CN 9H-1,7a-(Epoxyethano)-1H,6aH-cyclopenta[c]furo[2,3-b]furo[3',2':3,4]cyclopenta[1,2-d]furan-5,9,12(4H)-trione, 3-(1,1-dimethylethyl)hexahydro-2,4,7b,11-tetrahydroxy-8-methyl-, (1S,2R,3S,3aS,4R,6aR,7aR,7bR,8S,10aS,11R,11aR) - (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5H-Dicyclopenta[b,c]furan-3,5a(6H)-diacetic acid, 6-tert-butyl-3a-carboxyhexahydro- α 5a,1,2,3,5,7,8-heptahydroxy- α 3-methyl-, tri- γ -lactone
CN 9H-1,7a-(Epoxyethano)-1H,6aH-cyclopenta[c]furo[2,3-b]furo[3',2':3,4]cyclopenta[1,2-d]furan-5,9,12(4H)-trione, 3-tert-butylhexahydro-2,4,7b,11-tetrahydroxy-8-methyl- (8CI)
CN Ginkgolide A, 1,7-dihydroxy-, (1 β ,7 β) -
OTHER NAMES:
CN 9H-1,7a-(Epoxyethano)-1H,6aH-cyclopenta[c]furo[2,3-b]furo[3',2':3,4]cyclopenta[1,2-d]furan-5,9,12(4H)-trione, 3-(1,1-dimethylethyl)hexahydro-2,4,7b,11-tetrahydroxy-8-methyl-, [1R-(1 α ,2 α ,3 β ,3aS*,4 β ,6 α ,7 α ,7b α ,8 α ,10 α ,11 α ,11aR*)] -
CN BN 52022
CN **Ginkgolide C**
FS STEREOSEARCH
DR 219608-62-5
MF C20 H24 O11
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CSCHEM, DDFU, DRUGU, EMBASE, IPA, MEDLINE, MRCK*, NAPRALERT, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)



198 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
199 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 5 OF 5 REGISTRY COPYRIGHT 2005 ACS on STN

RN 15291-75-5 REGISTRY
 ED Entered STN: 16 Nov 1984
 CN 9H-1,7a-(Epoxyethano)-1H,6aH-cyclopenta[c]furo[2,3-b]furo[3',2':3,4]cyclopenta[1,2-d]furan-5,9,12(4H)-trione, 3-(1,1-dimethylethyl)hexahydro-4,7b-dihydroxy-8-methyl-, (1R,3S,3aS,4R,6aR,7aR,7bR,8S,10aS,11aS)-(9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN 9H-1,7a-(Epoxyethano)-1H,6aH-cyclopenta[c]furo[2,3-b]furo[3',2':3,4]cyclopenta[1,2-d]furan-5,9,12(4H)-trione, 3-tert-butylhexahydro-4,7b-dihydroxy-8-methyl- (8CI)
 CN **Ginkgolide A**
 OTHER NAMES:
 CN 9H-1,7a-(Epoxyethano)-1H,6aH-cyclopenta[c]furo[2,3-b]furo[3',2':3,4]cyclopenta[1,2-d]furan-5,9,12(4H)-trione, 3-(1,1-dimethylethyl)hexahydro-4,7b-dihydroxy-8-methyl-, [1R-(1 α ,3 β ,3aS*,4 β ,6a α ,7a α ,7b α ,8 α ,10a α ,11aS*)]-
 BN 52020
 CN [1R-(1 α ,3 β ,3aS*,4 β ,6a α ,7a α ,7b α ,8 α ,10a α ,11aS*)]-3-(1,1-Dimethylethyl)hexahydro-4,7b-dihydroxy-8-methyl-
 9H-1,7a-(epoxyethano)-1H,6aH-cyclopenta[c]furo[2,3-b]furo[3',2':3,4]cyclopenta[1,2-d]furan-5,9,12(4H)-trione
 FS STEREOSEARCH
 DR 119677-04-2
 MF C20 H24 O9
 CI COM
 LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CHEMCATS, CSCHEM, DDFU, DRUGU, EMBASE, IPA, MEDLINE, MRCK*, NAPRALERT, PROMT, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL
 (*File contains numerically searchable property data)



307 REFERENCES IN FILE CA (1907 TO DATE)
 21 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 308 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 11:05:29 ON 18 APR 2005

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FILE COVERS 1907 - 18 Apr 2005 VOL 142 ISS 17
FILE LAST UPDATED: 17 Apr 2005 (20050417/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d que 125

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L1 (      1)SEA FILE=REGISTRY ABB=ON  PLU=ON  "GINKGOLIDE A"/CN
L2 (      1)SEA FILE=REGISTRY ABB=ON  PLU=ON  "GINKGOLIC ACID"/CN
L3 (      1)SEA FILE=REGISTRY ABB=ON  PLU=ON  BILOBALIDE/CN
L4 (      1)SEA FILE=REGISTRY ABB=ON  PLU=ON  "GINKGOLIDE C"/CN
L5 (      1)SEA FILE=REGISTRY ABB=ON  PLU=ON  "GINKGOLIDE B"/CN
L6      5 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5)

L7      2899 SEA FILE=HCAPLUS ABB=ON  PLU=ON  GINKGO/OBI
L8      1258 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L7 (L) EXT?/OBI
L9      15974 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ULTRAFILTRA?/OBI
L10      4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L8 AND L9
L11      2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L7 (L) L9
L12      16962 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ULTRAFILT?/OBI
L13      4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L7 AND L12
L14      17699 SEA FILE=HCAPLUS ABB=ON  PLU=ON  TERPENOID#/OBI OR TERPENLACTON
      E?/OBI
L15      6700 SEA FILE=HCAPLUS ABB=ON  PLU=ON  FLAVONGLYCOSIDE#/OBI OR
      GLYCOSIDE?/OBI (L) FLAVON?/OBI
L16      26584 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ULTRAFILTR?/AB
L18      157 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L7 AND L15
L19      7 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L18 AND L14
L20      856 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L6
L21      3 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L20 AND (L9 OR L16)
L22      226941 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ( HIGH## (4A) (CONTEN? OR
      PERCENT? OR AMOUNT? OR AMT#))
L23      58 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L22 AND L7
L24      7 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L23 AND (L14 OR L15)
L25      18 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L24 OR L21 OR L19 OR L13 OR
      L11 OR L10

```

=> d .ca 125 1-18

THE ESTIMATED COST FOR THIS REQUEST IS 53.46 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:y

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L25 ANSWER 1 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:237574 HCAPLUS
DOCUMENT NUMBER: 141:354939
TITLE: Further purification of Ginkgo biloba
      flavones by ultrafiltration
AUTHOR(S): Xu, Zhi-hong; Xiao, Ze-yi; Li, Lei; Zhang, Zhi-bing
CORPORATE SOURCE: Department of Chemical Engineering, Nanjing
      University, Nanjing, Jiangsu, 210093, Peop. Rep. China
SOURCE: Jingxi Huagong (2004), 21(2), 112-114, 124

```

CODEN: JIHUFJ; ISSN: 1003-5214
 PUBLISHER: Jingxi Huagong Bianjibu
 DOCUMENT TYPE: Journal
 LANGUAGE: Chinese

ED Entered STN: 23 Mar 2004

AB Expts. for further concentration of flavones from Ginkgo biloba extract were carried out by use of a sulfonated polyethersulfone ultrafiltration membrane with mol. weight cut-off of 10000. Concentration of total flavones in the filtrate can

be elevated from $w(\text{flavones}) = 21.3\%$ in the original extract to $w(\text{flavones}) = 39.2\%$. The effects of feed temperature and filtration pressure on the operation were tested and discussed. The results showed that the flux of ultrafiltration increased from $7.5 \text{ L}/(\text{m}^2 \cdot \text{h})$ to $11.2 \text{ L}/(\text{m}^2 \cdot \text{h})$ when the temperature varied from 30° to 40° , and it increased from $6.1 \text{ L}/(\text{m}^2 \cdot \text{h})$ to $10.0 \text{ L}/(\text{m}^2 \cdot \text{h})$ as the pressure changed from 0.15 MPa to 0.25 MPa, but both temperature and pressure had little impact on the selectivity.

CC 63-4 (Pharmaceuticals)

ST purifn **Ginkgo biloba flavone ultrafiltration**

IT Concentration (process)

Extraction

Ginkgo biloba

Ultrafilters

Ultrafiltration

(further purification of **Ginkgo biloba flavones** by **ultrafiltration**)

IT Flavones

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)

(further purification of **Ginkgo biloba flavones** by **ultrafiltration**)

IT 25667-42-9D, Polyethersulfone, Sulfonated

RL: NUU (Other use, unclassified); USES (Uses)

(further purification of **Ginkgo biloba flavones** by **ultrafiltration**)

L25 ANSWER 2 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:698433 HCAPLUS

DOCUMENT NUMBER: 139:348123

TITLE: Research on effect of culture condition factors on synthesis of **flavone glycosides** in cell suspension of **Ginkgo biloba L**

AUTHOR(S): Li, Chun-bin; Wang, Guan-lin; Yue, Yu-lian; Jiang, Bo; Fang, Hong-jun

CORPORATE SOURCE: School of Chem. Eng., Dalian Univ. of Technol., Dalian, 116012, Peop. Rep. China

SOURCE: Dalian Ligong Daxue Xuebao (2003), 43(3), 287-291

CODEN: DLXUEJ; ISSN: 1000-8608

PUBLISHER: Dalian Ligong Daxue

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

ED Entered STN: 07 Sep 2003

AB The content of flavone glycosides from young leaves of 12 various breed Ginkgo biloba L. was detected, the result shows that there is a big difference in the content of flavone glycosides for the different breeds. The content of Meihe, 3.32%, is the highest, and that of Dabaiguo, 0.84%, is the lowest. In addition, the content of Meihe of callus from young leaves, 1.26%, is the highest; and that of Lingnan of callus from young leaves, 0.22%, is the lowest. The callus, which grows fast and has

higher content of flavone glycosides was selected, and cultured in B5 suspension medium, and many culture conditions on cell growth and content of flavone glycosides were investigated. About 50 mL culture substance was loaded in 150 mL flask, and the weight of inoculation was 30-40 g/L, then the light intensity was 3000-4000 lx, carbon source is sucrose. The condition mentioned above is optimum to the synthesis of flavone glycosides. While carbon source is glucose, it is optimum to the growth of cells. The result from HPLC anal. shows that the content of flavone glycosides of dry weight is 2.82% in suspension cell.

CC 11-1 (Plant Biochemistry)

ST **Ginkgo cell culture flavone glycoside**

IT **Glycosides**

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**flavonoid**, oxo; research on effect of culture condition factors on synthesis of **flavone glycosides** in cell suspension of **Ginkgo biloba** L)

IT **Ginkgo biloba**

(research on effect of culture condition factors on synthesis of **flavone glycosides** in cell suspension of **Ginkgo biloba** L)

IT Animal tissue culture

(suspension; research on effect of culture condition factors on synthesis of **flavone glycosides** in cell suspension of **Ginkgo biloba** L)

L25 ANSWER 3 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:356164 HCAPLUS

DOCUMENT NUMBER: 138:367888

TITLE: Improved botanical extractions process using stabilizing antioxidants and carboxylic acids.

INVENTOR(S): Greene, John Bertram

PATENT ASSIGNEE(S): Brightwater Horticulture Limited, N. Z.

SOURCE: PCT Int. Appl., 24 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003037096	A1	20030508	WO 2002-NZ230	20021031
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
NZ 515182	A	20040326	NZ 2001-515182	20011031
US 2005053677	A1	20050310	US 2004-493961	20041019
PRIORITY APPLN. INFO.:			NZ 2001-515182	A 20011031
			WO 2002-NZ230	W. 20021031

ED Entered STN: 09 May 2003

AB The present invention discloses a method of extracting biol. active compds. from botanical material, the method stabilizing the botanical material from oxidative degradation This preserves the biol. active compds. in the

material. In the main embodiment, the plant material is mixed with a solution containing at least one acid and one antioxidant. The oxidative degradation

of the biol. active compds. in plant material can be prevented, slowed or stopped by the invention.

IC ICM A23F003-16

ICS A23F003-18; C07B063-00; C07C039-19; C07C039-21; C07C057-42;
C07C059-52; C07G017-00

CC 17-2 (Food and Feed Chemistry)

Section cross-reference(s): 63

IT Angelica sinensis

Antioxidants

Atmosphere (environmental)

Bark

Berry

Black cohosh

Chamomile

Crataegus

Cynara scolymus

Drying

Echinacea

Echinacea purpurea

Embryophyta

Extraction

Filtration

Flower

Freeze drying

Freezing

Ginkgo biloba

Humulus

Hypericum

Leaf

Panax

Passiflora

Piper methysticum

Reverse osmosis

Ribes

Trifolium pratense

Ultrafiltration

(improved botanical **extns.** process using stabilizing antioxidants and carboxylic acids)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 4 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:243364 HCAPLUS

DOCUMENT NUMBER: 139:296634

TITLE: Extraction of **flavonoid glycosides** from **Ginkgo biloba** leaves and their adsorption separations using hydrophobic and anion-exchange membranes

AUTHOR(S): Yu, Fu-Chieh; Lai, Shih-Ming; Suen, Shing-Yi

CORPORATE SOURCE: Department of Chemical Engineering, National Chung Hsing University, Taichung, 402, Taiwan

SOURCE: Separation Science and Technology (2003), 38(5), 1033-1050

CODEN: SSTEDS; ISSN: 0149-6395

PUBLISHER: Marcel Dekker, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 30 Mar 2003

AB In this work, the extraction of flavonoid glycosides from Ginkgo biloba leaves and their adsorption separation performance using C18 hydrophobic and strong anion-exchange membranes were investigated. First, the preparation of crude Ginkgo biloba L. exts. was carried out using 70% ethanol, and the effects of different extraction conditions were evaluated. The results show that the extraction temperature (50-70°) and extraction time (1-5 h) did not significantly

influence the performance, but a lower solvent amount (50 g per 10 g dry leaves) resulted in a better extraction. Before the adsorption sepns., the exts. were dissolved in 30% ethanol to remove the undesirable biflavones and then used as feed solns. Eighty percent ethanol was used as the eluent in the elution stage. Comparing the performances for different processes, higher yield for total flavonoid glycoside amount (46-60% for hydrophobic membranes and 39-53% for anion-exchange membranes) was accomplished in the batch process. On the other hand, a **higher** flavonoid glycoside **content** at the top fraction of elution peak (10% for hydrophobic membranes and 7-13% for anion-exchange membranes) and a shorter process period were achieved in the flow process.

CC 63-4 (Pharmaceuticals)

Section cross-reference(s): 27

ST **flavonoid glycoside** extn **Ginkgo**

IT Extraction

Ginkgo biloba

(extraction of **flavonoid glycosides** from **Ginkgo biloba** leaves and adsorption sepns. using hydrophobic and anion-exchange membranes)

IT **Glycosides**

RL: NPO (Natural product occurrence); PRP (Properties); BIOL (Biological study); OCCU (Occurrence)

(**flavonoid**; extraction of **flavonoid glycosides** from **Ginkgo biloba** leaves and adsorption sepns. using hydrophobic and anion-exchange membranes)

IT 117-39-5, Quercetin 480-19-3, Isorhamnetin 520-18-3, Kaempferol

RL: NPO (Natural product occurrence); PRP (Properties); BIOL (Biological study); OCCU (Occurrence)

(extraction of **flavonoid glycosides** from **Ginkgo biloba** leaves and adsorption sepns. using hydrophobic and anion-exchange membranes)

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 5 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:15604 HCAPLUS

DOCUMENT NUMBER: 132:35038

TITLE: Water-soluble native vegetable dried **extract**, in particular **Ginkgo biloba extract with high content of terpenoids and flavone glycosides**

INVENTOR(S): Oschmann, Rainer; Grethlein, Eckardt

PATENT ASSIGNEE(S): Willmar Schwabe GmbH & Co., Germany

SOURCE: Ger. Offen., 8 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

DE 19829516	A1	20000105	DE 1998-19829516	19980702
DE 19829516	B4	20040826		
CA 2335148	AA	20000113	CA 1999-2335148	19990619
WO 2000001397	A1	20000113	WO 1999-DE1812	19990619

W: AU, CA, JP, US

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

AU 9954069	A1	20000124	AU 1999-54069	19990619
AU 745660	B2	20020328		
EP 1089748	A1	20010411	EP 1999-939923	19990619
EP 1089748	B1	20030604		
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL				
JP 2002519383	T2	20020702	JP 2000-557843	19990619
AT 241995	E	20030615	AT 1999-939923	19990619

PRIORITY APPLN. INFO.:

DE 1998-19829516	A	19980702
WO 1999-DE1812	W	19990619

ED Entered STN: 07 Jan 2000

AB A water-soluble native vegetable dried extract from plant parts, especially from

Ginkgo biloba leaves, contains flavone glycosides, terpene lactones and other components and is prepared from an ultrafiltered alc.-water extract preferably. The extract is used in dietetic foods, drugs and cosmetics.

IC ICM A23L001-221

ICS A23L001-30; A61K035-78; A61K031-70; A61K031-365; A61K007-00

CC 17-6 (Food and Feed Chemistry)

Section cross-reference(s): 62, 63

ST **Ginkgo leaf ext manuf flavone glycoside terpenoid**

IT Food

(dietetic; water-soluble native vegetable dried **extract**, in particular **Ginkgo biloba extract** with **high content of terpenoids and flavone glycosides**)

IT **Glycosides**

RL: BUU (Biological use, unclassified); FFD (Food or feed use); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(**flavonoid**, oxo; water-soluble native vegetable dried **extract**, in particular **Ginkgo biloba extract** with **high content of terpenoids and flavone glycosides**)

IT Terpenes, biological studies

RL: BUU (Biological use, unclassified); FFD (Food or feed use); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(lactones; water-soluble native vegetable dried **extract**, in particular **Ginkgo biloba extract** with **high content of terpenoids and flavone glycosides**)

IT **Ginkgo biloba**

(leaves; water-soluble native vegetable dried **extract**, in particular **Ginkgo biloba extract** with **high content of terpenoids and flavone glycosides**)

IT Cosmetics

Drugs

Plant (Embryophyta)

Ultrafiltration

(water-soluble native vegetable dried **extract**, in particular

**Ginkgo biloba extract with high
content of terpenoids and flavone
glycosides)**

- IT Terpenes, biological studies
RL: BUU (Biological use, unclassified); FFD (Food or feed use); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(water-soluble native vegetable dried **extract**, in particular **Ginkgo biloba extract with high content of terpenoids and flavone glycosides)**
- IT 9004-34-6, Cellulose, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process) (regenerated, **ultrafiltration** with S 1Y3; water-soluble native vegetable dried **extract**, in particular **Ginkgo biloba extract with high content of terpenoids and flavone glycosides)**
- IT 15291-75-5P, Ginkgolide A 15291-76-6P, Ginkgolide C 15291-77-7P, Ginkgolide B 22910-60-7P, Ginkgolic acid 33570-04-6P, Bilobalide
RL: BUU (Biological use, unclassified); FFD (Food or feed use); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(water-soluble native vegetable dried **extract**, in particular **Ginkgo biloba extract with high content of terpenoids and flavone glycosides)**
- REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 6 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:12273 HCAPLUS

DOCUMENT NUMBER: 132:227524

TITLE: Liquid chromatography/electrospray mass spectrometry of bioactive **terpenoids** in **Ginkgo biloba L.**

AUTHOR(S): Mauri, Pierluigi; Migliazza, Barbara; Pietta, Piergiorgio

CORPORATE SOURCE: ITBA/CNR, Milan, 20090, Italy

SOURCE: Journal of Mass Spectrometry (1999), 34(12), 1361-1367
CODEN: JMSPFJ; ISSN: 1076-5174

PUBLISHER: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 06 Jan 2000

AB Standardized exts. of G. biloba leaves are mainly used in the treatment of peripheral and cerebral circulation disorders, and also as a remedy against asthma, coughs, bladder inflammation, blenorrhagia and alc. abuse. The leaf exts. contain biflavones, flavonol glycosides and terpene lactones. This paper reports a method based on liquid chromatog. coupled with electrospray mass spectrometry for the anal. of terpenoids in G. biloba exts. This method allows the rapid isocratic separation of underivatized ginkgolides (A, B, C and J) and bilobalide at very low levels (10 pg on the column) and their quant. detection by external standardization with relative standard deviations of 3 and 5% for intra- and inter-day analyses, resp.

CC 64-2 (Pharmaceutical Analysis)

ST liq chromatog mass spectrometry **terpenoid Ginkgo**; HPLC mass spectrometry **terpenoid detection Ginkgo**; ginkgolide detection **Ginkgo** chromatog mass spectrometry;

- electrospray mass spectrometry **Ginkgo terpenoid**
- IT **Glycosides**
 RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence)
 (flavonoid; liquid chromatog./electrospray mass spectrometry of bioactive **terpenoids** in **Ginkgo biloba** exts..)
- IT Terpenes, analysis
 RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence)
 (lactones; liquid chromatog./electrospray mass spectrometry of bioactive **terpenoids** in **Ginkgo biloba** exts..)
- IT Mass spectrometry
 Mass spectrometry
 (liquid chromatog. combined with; liquid chromatog./electrospray mass spectrometry of bioactive **terpenoids** in **Ginkgo biloba** exts..)
- IT Electrospray ionization mass spectrometry
Ginkgo biloba
 HPLC
 (liquid chromatog./electrospray mass spectrometry of bioactive **terpenoids** in **Ginkgo biloba** exts..)
- IT Flavonoids
 RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence)
 (liquid chromatog./electrospray mass spectrometry of bioactive **terpenoids** in **Ginkgo biloba** exts..)
- IT Liquid chromatography
 Liquid chromatography
 (mass spectrometry combined with; liquid chromatog./electrospray mass spectrometry of bioactive **terpenoids** in **Ginkgo biloba** exts..)
- IT 153-18-4, Quercetin 3-O-rutinoside 604-80-8, Isorhamnetin 3-O-rutinoside 15291-75-5, Ginkgolide A 15291-76-6, Ginkgolide C 15291-77-7, Ginkgolide B 17650-84-9, Kaempferol 3-O-rutinoside 32453-37-5 32690-74-7 33570-04-6, Bilobalide 107190-70-5 107190-71-6 107438-79-9, Ginkgolide J 175089-93-7 261353-22-4
 RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence)
 (liquid chromatog./electrospray mass spectrometry of bioactive **terpenoids** in **Ginkgo biloba** exts..)

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 7 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:9524 HCAPLUS

DOCUMENT NUMBER: 130:220036

TITLE: Automated electron spin resonance free radical detector assays for antioxidant activity in natural extracts

AUTHOR(S): Noda, Yasuko; Kohno, Masahiro; Mori, Akitane; Packer, Lester

CORPORATE SOURCE: Department of Molecular and Cell Biology, University of California, Berkeley, CA, 94720-3200, USA

SOURCE: Methods in Enzymology (1999), 299(Oxidants and Antioxidants, Part A), 28-34
 CODEN: MENZAU; ISSN: 0076-6879

PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English

ED Entered STN: 07 Jan 1999

AB There is now increasing interest in the antioxidant activity of phytochemicals present in the diet, in health food supplements (nutraceuticals), and in topical preparations for protection of the skin (cosmeceuticals) from environmental exposure. A simple and rapid estimation of hydroxyl and superoxide anion radical scavenging activities by aqueous extract from natural sources can be made using a new computerized JEOL ESR system. The relative free radical scavenging activities of various samples are able to be evaluated based on normalizing ESR (ESR) signals relative to the standard activity of L-ascorbic acid 2-[3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-1-benzopyran-6-yl hydrogen phosphate] potassium salt (EPC-K1) as a scavenger of hydroxyl radical and copper-zinc superoxide dismutase (SOD) as a superoxide anion radical scavenger. Treatment of extracts with ascorbate oxidase reveals that in some cases the presence of vitamin C partially accounts for hydroxyl and superoxide anion radical scavenging activities. Treatments with centrifuge-type filters [Ultrafree-MC filters: 10,000 nominal mol. weight limit (NMWL) regenerated cellulose membrane or 100,000 NMWL polysulfone membrane] divide antioxidant activities in a sample to low mol. weight materials and high mol. materials (such as enzymes), and heat treatment also shows the contribution of heat-inactivated components to antioxidant activities in a sample. (c) 1999 Academic Press.

CC 9-5 (Biochemical Methods)
Section cross-reference(s): 11

IT ESR spectroscopy
 Ginkgo biloba
 Heat treatment
 Plant analysis
 Process automation
 Radical scavengers
 Ultrafiltration
 (automated ESR free radical detector assays for antioxidant activity in plant extracts.)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 8 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:127079 HCAPLUS

DOCUMENT NUMBER: 128:132398

TITLE: **High-content** flavone lactone
extracts from **ginkgo** leaves

INVENTOR(S): Xie, Delong; Wang, Ning; Gao, Qi

PATENT ASSIGNEE(S): State Chinese Medicine Pharmaceutical Engineering
Research Center, Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 22 pp.
CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1145230	A	19970319	CN 1995-111763	19950915
CN 1073848	B	20011031		
PRIORITY APPLN. INFO.:			CN 1995-111763	19950915
ED Entered STN: 04 Mar 1998				

AB **High-content** flavone lactone exts. from ginkgo leaves are prepared containing total flavones >44% [flavone glucoside \geq 24%], lactone >6% and ginkgoic acid <10 ppm. The exts. are useful for protecting the function of heart and brain blood vessels.

IC ICM A61K035-78
ICS A61K031-365; C07D311-30

CC 63-4 (Pharmaceuticals)
Section cross-reference(s): 1, 11

ST flavone lactone ext **ginkgo** leaf

IT Blood vessel
(brain; **high-content** flavone lactone exts. from **ginkgo** leaves for protection of)

IT Lactones
RL: PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(flavone; **high-content** flavone lactone exts. from **ginkgo** leaves)

IT **Glycosides**
RL: PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**flavonoid**, oxo; **high-content** flavone lactone exts. from **ginkgo** leaves)

IT Heart
(function; **high-content** flavone lactone exts. from **ginkgo** leaves for protection of)

IT **Ginkgo**
(**high-content** flavone lactone exts. from **ginkgo** leaves)

IT Flavones
RL: PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**high-content** flavone lactone exts. from **ginkgo** leaves)

IT 22910-60-7P, Ginkgoic acid
RL: PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**high-content** flavone lactone exts. from **ginkgo** leaves for protection of)

L25 ANSWER 9 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:479909 HCAPLUS

DOCUMENT NUMBER: 122:261362

TITLE: Seasonal and sexual variation of ginkgolides contents in **ginkgo** leaves

AUTHOR(S): Sung, Sang Hyun; Jeon, Soon Hwa; Moon, Young Shim; Lee, Heum Sook; Huh, Hoon; Kim, Young Choong

CORPORATE SOURCE: Coll. Pharmacy, Seoul Natl. Univ., Seoul, 151-742, S. Korea

SOURCE: Yakhak Hoechi (1994), 38(1), 20-3
CODEN: YAHOA3; ISSN: 0513-4234

PUBLISHER: Pharmaceutical Society of Korea

DOCUMENT TYPE: Journal

LANGUAGE: Korean

ED Entered STN: 11 Apr 1995

AB The contents of ginkgolides were determined in the leaves of male and female Ginkgo biloba from late spring until mid-autumn. Ginkgolides were detected during the whole growing season in the leaves of each tree. Ginkgolides content was low in late spring, gradually increased to reach a maximum in August and decreased thereafter. The male trees have two or three times **higher** ginkgolides **content** than the female

trees. Comparing these results with that of previously reported values, the sexual variation of ginkgolides content seemed not to be genetic.

CC 11-8 (Plant Biochemistry)
 ST **ginkgo** leaf season sex ginkgolide variation
 IT Terpenes and **Terpenoids**, biological studies
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
 BIOL (Biological study); OCCU (Occurrence)
 (ginkgolides; seasonal and sexual variation of ginkgolides contents of leaves of)
 IT **Ginkgo biloba**
 (seasonal and sexual variation of ginkgolides contents of leaves of)

L25 ANSWER 10 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1992:524394 HCAPLUS

DOCUMENT NUMBER: 117:124394

TITLE: Effects of **Ginkgo biloba** extract (Egb 761)
 on the guinea pig vestibular system

AUTHOR(S): Yabe, Takao; Chat, Mireille; Malherbe, Eric; Vidal, Pierre Paul

CORPORATE SOURCE: Lab. Physiol. Neurosensorielle, CNRS, Paris, 75270, Fr.

SOURCE: Pharmacology, Biochemistry and Behavior (1992), 42(4), 595-604

CODEN: PBBHAU; ISSN: 0091-3057

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 04 Oct 1992

AB Previous studies have demonstrated that the administration of **Ginkgo biloba** extract (Egb 761) improves the compensation of the vestibular syndrome induced by transection of the VIIIth nerve. To investigate the mechanisms at play, the vestibular nuclei of alert guinea pigs were perfused with Egb 761 (containing 24% flavonoid glycosides (ginkgo flavone glycosides) and 6% terpene lactones). This perfusion always induced a stereotyped reversible postural syndrome that was the mirror image of the syndrome provoked by the unilateral lesion of the otolithical receptors. This result supports the hypothesis that Egb 761 has a direct excitatory effect on the lateral vestibular nuclei (LVN) neurons. In a second step, the authors quantified the horizontal vestibulo-ocular reflex (HVOR) of the normal guinea pig following IP injection of Egb 761. In normal guinea pig, IP administration of Egb 761 led to a reversible, dose-dependent decrease of the HVOR gain without affecting the phase of the reflex. These data help to explain the therapeutic effects of Egb 761 during vestibular syndromes and strongly suggest an impact at the neuronal level.

CC 1-11 (Pharmacology)

ST **Ginkgo** ext Egb761 vestibular system disorder; **flavonoid glycoside** **Ginkgo** ext vestibular system; terpene lactone
Ginkgo ext vestibular system

IT **Ginkgo biloba**
 (extract containing **flavonoid glycosides** and terpene lactones of, vestibular system disorder treatment with, mechanism of)

IT **Glycosides**
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(**flavonoid**, vestibular system disorder treatment with
Ginkgo biloba extract Egb 761 containing, mechanism of)

IT Terpenes and **Terpenoids**, biological studies
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(lactones, vestibular system disorder treatment with **Ginkgo biloba** extract EGb 761 containing, mechanism of)

IT Nervous system
(vestibular, disease, **Ginkgo biloba** extract EGb 761 containing **flavonoid glycosides** and terpene lactones for treatment of, mechanism of)

L25 ANSWER 11 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1992:91516 HCAPLUS

DOCUMENT NUMBER: 116:91516

TITLE: Seasonal variations of the flavonoid content from **Ginkgo biloba** leaves

AUTHOR(S): Lobstein, A.; Rietsch-Jako, L.; Haag-Berrurier, M.; Anton, R.

CORPORATE SOURCE: Lab. Pharmacogn., Fac. Pharm., Strasbourg, F-67401, Fr.

SOURCE: Planta Medica (1991), 57(5), 430-3
CODEN: PLMEAA; ISSN: 0032-0943

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 06 Mar 1992

AB N HPLC method for the separation and the determination of flavonol glycosides, acylflavonol glycosides, and biflavones in crude leaf exts. from **G. biloba** is described. The results, expressed in percentage of rutin, kaempferol p-coumaroyl glucorhamnoside, and bilobetin showed a **higher amount** of acylflavonol glycosides in buds, of flavonol glycosides in spring leaves, and of biflavones in autumn leaves.

CC 64-2 (Pharmaceutical Analysis)
Section cross-reference(s): 11, 63

ST **flavonoid** detn **Ginkgo** HPLC season; **glycoside**
flavonoid Ginkgo HPLC; chromatog liq **flavonoid Ginkgo**

IT Plant analysis
(biflavones and **flavonol glycosides** determination by HPLC in **Ginkgo biloba** leaves in, seasonal variations in relation to)

IT **Ginkgo biloba**
(biflavones and **flavonol glycosides** determination in leaves of, by HPLC, seasonal variations in relation to)

IT Plant growth and development
(biflavones and **flavonol glycosides** of **Ginkgo biloba** leaves in relation to, HPLC study of)

IT Carboxylic acids, analysis
RL: ANT (Analyte); ANST (Analytical study)
(determination of, in **Ginkgo biloba** leaves by HPLC, seasonal variations in relation to)

IT Flavonoids
RL: ANT (Analyte); ANST (Analytical study)
(bi-, oxo, determination of, in **Ginkgo biloba** leaves by HPLC, seasonal variations in relation to)

IT **Glycosides**
RL: ANT (Analyte); ANST (Analytical study)
(**flavonoid**, determination of, in **Ginkgo biloba** leaves by HPLC, seasonal variations in relation to)

IT Chromatography, column and liquid
(high-performance, biflavones and **flavonol glycosides** determination in **Ginkgo biloba** leaves by, seasonal variations in relation to)

IT 138-59-0, Shikimic acid 153-18-4, Quercetin 3-O-rutinoside 480-10-4
481-46-9, Ginkgetin 482-35-9, Quercetin 3-O-glucoside 521-32-4,

Bilobetin 521-34-6, Sciadopitysin 548-19-6, Isoginkgetin 1617-53-4,
 Amentoflavone 3778-29-8, 6-Hydroxykynurenic acid 102231-39-0
 113447-39-5

RL: ANT (Analyte); ANST (Analytical study)
 (determination of, in **Ginkgo** biloba leaves by HPLC, seasonal
 variations in relation to)

L25 ANSWER 12 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1991:647539 HCAPLUS

DOCUMENT NUMBER: 115:247539

TITLE: Role of platelet activating factor in gentamicin and
 cisplatin nephrotoxicity

AUTHOR(S): Pavao dos Santos, Oscar F.; Boim, Mirian A.; Barros,
 Elvino J. G.; Schor, Nestor

CORPORATE SOURCE: Neprhol. Div., Esc. Paul. Med., Sao Paulo, 04023,
 Brazil

SOURCE: Kidney International (1991), 40(4), 742-7

CODEN: KDYIA5; ISSN: 0085-2538

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 14 Dec 1991

AB The present study was undertaken to evaluate the effects of platelet
 activating factor (PAF) antagonists on nephrotoxicity induced by
 gentamicin (GENTA) and cisplatin (DDP) in rats. PAF infusion provoked a
 56% decline in single nephron (SN) GFR due to a decrease in glomerular
 plasma flow (QA, 55%), glomerular transcapillary hydraulic pressure
 (ΔP , 13%), and glomerular **ultrafiltration** coefficient (Kf,
 37%). Four days after a single dose of DDP (6 mg/kg, i.p.) the authors
 observed non-oliguric acute renal failure (ARF) with reduced SNGFR (45%), QA
 (46%) and ΔP (10%) and unchanged Kf. GENTA administration for 10
 days (40 mg/kg, i.p. daily) induced a decline in SNGFR (40%), QA (41%) and
 Kf (41%). Chronic treatment with a GENTA + PAF antagonist (BN 52021)
 partially prevented the decline in SNGFR (22%) by an amelioration in QA
 (25%) and Kf (13%). However, simultaneous treatment with DDP and BN 52063
 completely prevented the ARF induced by DDP, normalizing all parameters of
 renal function. Thus, PAF may be a potential mediator involved in the
 nephrotoxicity induced by GENTA and DDP.

CC 1-4 (Pharmacology)

IT 15291-77-7, BN 52021

RL: BIOL (Biological study)

(gentamicin and cisplatin kidney toxicity prevention by, platelet
 activating factor inhibition in relation to)

L25 ANSWER 13 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1991:88633 HCAPLUS

DOCUMENT NUMBER: 114:88633

TITLE: Extraction of tharapeutic flavons from **ginkgo**
 leaves

INVENTOR(S): Matsumoto, Takeshi

PATENT ASSIGNEE(S): Daicel Chemical Industries, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02193907	A2	19900731	JP 1989-10772	19890119

PRIORITY APPLN. INFO.: JP 1989-10772 19890119
 ED Entered STN: 09 Mar 1991
 AB Dried ginkgo leaves are treated with e.g. 30-45% EtOH to give an extract containing therapeutic biflavones, terpenes, and flavone glycosides. Harmful salicylates are nondetectable. The preps. also can be used in manufacturing cosmetics and foods.
 IC ICM A61K007-00
 ICS A23L001-30; A61K035-78
 ICA A23L001-212
 CC 63-4 (Pharmaceuticals)
 Section cross-reference(s): 11, 17, 62
 ST **ginkgo** biflavone terpene extn; **flavone glycoside** extn **ginkgo**
 IT Terpenes and **Terpenoids**, biological studies
 RL: PROC (Process)
 (extraction of, from **ginkgo** leaves)
 IT **Ginkgo**
 (leaves, therapeutic biflavone terpene and **flavone glycoside** extraction from)
 IT Flavonoids
 RL: PROC (Process)
 (bi-, oxo, extraction of, from **ginkgo** leaves)
 IT **Glycosides**
 RL: PROC (Process)
 (**flavonoid**, oxo, extraction of, from **ginkgo** leaves)

L25 ANSWER 14 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1990:551138 HCAPLUS
 DOCUMENT NUMBER: 113:151138
 TITLE: Manufacture of chocolate containing terpenes and **flavone glycosides** of **ginkgo** leave extract
 INVENTOR(S): Matsumoto, Takeshi; Matsumoto, Akiko
 PATENT ASSIGNEE(S): Daicel Chemical Industries, Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02031646	A2	19900201	JP 1988-182033	19880721

PRIORITY APPLN. INFO.: JP 1988-182033 19880721
 ED Entered STN: 27 Oct 1990
 AB A chocolate is prepared with a ginkgo extract containing (1) a terpene-like ginkgolide, bilobalide, etc., (2) glycoside-like quercetin glycoside, kaempferol glycoside, etc., or (3) a mixture of these, which is effective in treating senile dementia and cerebral apoplexy.
 IC ICM A23G001-00
 ICA A61K035-78
 CC 17-13 (Food and Feed Chemistry)
 Section cross-reference(s): 1, 11
 ST **ginkgo** terpene glycoside chocolate
 IT **Ginkgo**
 (leaves, terpenes and glycosides of, chocolate manufacture with)
 IT Chocolate
 (manufacture of, containing terpenes and **flavone glycosides** of **ginkgo** leaves exts.)

IT Terpenes and **Terpenoids**, biological studies
 RL: BIOL (Biological study)
 (of **ginkgo** leaf exts., chocolate containing)

IT Brain, composition
 (circulatory, treatment of, terpenes and glycosides of **ginkgo**
 leaves for)

IT Mental disorder
 (senile psychosis, treatment of, terpenes and glycosides of
ginkgo leaves for)

IT 117-39-5D, Quercetin, glycosides 520-18-3D, Kaempferol, glycosides
 525-82-6D, **Flavone, glycosides** 15291-75-5,
 Ginkgolide A 33570-04-6, Bilobalide
 RL: BIOL (Biological study)
 (of **ginkgo** leaf exts., chocolate containing)

L25 ANSWER 15 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1990:503374 HCAPLUS

DOCUMENT NUMBER: 113:103374

TITLE: Therapeutic chewing gum containing terpenes and
flavone glycosides from
ginkgo leaves

INVENTOR(S): Matsumoto, Takeshi; Matsumoto, Akiko

PATENT ASSIGNEE(S): Daicel Chemical Industries, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02031648	A2	19900201	JP 1988-182034	19880721
PRIORITY APPLN. INFO.:			JP 1988-182034	19880721

ED Entered STN: 16 Sep 1990

AB A chewing gum contains terpenes (ginkgolide, bilobalide, etc.) and/or
 flavone glycosides (quercetin glycoside, kaempferol glycoside, etc.).
 The gum is effective in treating cerebral apoplexy. An extract containing the
 compds. described above was obtained from ginkgo leaves and incorporated
 into chewing gums.

IC ICM A23G003-30

ICS A61K035-78

CC 63-4 (Pharmaceuticals)

Section cross-reference(s): 11

ST **ginkgo** ext chewing gum; **flavone glycoside**
 chewing gum; terpene chewing gum; cerebral apoplexy therapy chewing gum

IT Terpenes and **Terpenoids**, biological studies

RL: BIOL (Biological study)

(**ginkgo** leave extract containing, for therapeutic chewing gum)

IT **Ginkgo**
 (leaves, terpenes and **flavone glycosides** from,
 therapeutic chewing gum containing)

IT Chewing gum
 (therapeutic, containing terpenes and **flavone glycosides**
)

IT Brain, disease or disorder
 (hemorrhage, treatment of, chewing gums containing terpenes and
flavone glycosides for)

IT 117-39-5D, Quercetin, glycosides 520-18-3D, glycosides 525-82-6D,
Flavone, glycosides 15291-75-5, Ginkgolide A

33570-04-6

RL: BIOL (Biological study)

(ginkgo leave extract containing, for therapeutic chewing gum)

L25 ANSWER 16 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1990:84292 HCAPLUS

DOCUMENT NUMBER: 112:84292

TITLE: Thin-layer and HPLC analysis of ginkgo extracts and extract-containing phytopreparations

AUTHOR(S): Wagner, Hildebert; Bladt, Sabine; Hartmann, Ute; Daily, Amir; Berkulin, Willi

CORPORATE SOURCE: Inst. Pharm. Biol., Univ. Muenchen, Munich, D-8000/2, Fed. Rep. Ger.

SOURCE: Deutsche Apotheker Zeitung (1989), 129(45), 2421-9
CODEN: DAZE2; ISSN: 0011-9857

DOCUMENT TYPE: Journal

LANGUAGE: German

ED Entered STN: 03 Mar 1990

AB HPLC and TLC methods for the characterization and determination of the components

of pharmaceutical ginkgo exts. are described, including TLC methods for flavonolacyl- and flavonol glycosides, biflavonoids, procyanidins, acyl phenols and phenol carboxylic acids, ginkgolides and other terpenoids determination, and HPLC of some of these and for quant. detns. of total flavonol

glycosides, procyanidins, and 6-hydroxykynurenic acid.

CC 64-2 (Pharmaceutical Analysis)

Section cross-reference(s): 63

ST chromatog ginkgo pharmaceutical; HPLC ginkgo pharmaceutical; TLC ginkgo pharmaceutical

IT Phenols, analysis

Procyanidins

Terpenes and Terpenoids, analysis

RL: ANT (Analyte); ANST (Analytical study)

(determination of, in Ginkgo biloba drugs, HPLC and TLC in)

IT Chromatography, thin-layer

(of Ginkgo biloba drugs)

IT Plant analysis

(of Ginkgo biloba exts., HPLC and TLC in)

IT Ginkgo biloba

(pharmaceutical exts. of, HPLC and TLC of)

IT Flavonoids

RL: ANT (Analyte); ANST (Analytical study)

(bi-, determination of, in Ginkgo biloba drugs, HPLC and TLC in)

IT Glycosides

RL: ANT (Analyte); ANST (Analytical study)

(flavonoid, determination of, in Ginkgo biloba drugs, HPLC and TLC in)

IT Chromatography, column and liquid

(high-performance, of Ginkgo biloba drugs)

IT Flavonoids

RL: ANT (Analyte); ANST (Analytical study)

(oxo hydroxy, determination of, in Ginkgo biloba drugs, HPLC and TLC in)

IT 117-39-5, Quercetin 480-19-3 520-18-3

RL: ANT (Analyte); ANST (Analytical study)

(determination of, in Ginkgo biloba drugs, by HPLC and TLC)

IT 138-59-0, Shikimic acid 153-18-4, Rutin 154-23-4, Catechin 480-10-4,
Astragalin 481-46-9, Ginkgetin 501-26-8, Ginkgol 521-32-4, Bilobetin
521-34-6, Sciadopitysin 548-19-6, Isoginkgetin 3778-29-8 7400-08-0

15291-75-5, Ginkgolide A 15291-76-6 15291-77-7 33570-04-6,

Bilobalide

RL: ANT (Analyte); ANST (Analytical study)

(determination of, in Ginkgo biloba drugs, by TLC)

L25 ANSWER 17 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1989:400407 HCAPLUS

DOCUMENT NUMBER: 111:407

TITLE: Effect of platelet-activating factor antagonist on cyclosporine nephrotoxicity

AUTHOR(S): Dos Santos, Oscar F. Pavao; Boim, Mirian A.; Bregman, Rachel; Draibe, Sergio A.; Barros, Elvino J. G.; Pirotzky, Eduardo; Schor, Nestor; Braquet, Pierre

CORPORATE SOURCE: Nephrol. Div., Esc. Paulista Med., Sao Paulo, Brazil

SOURCE: Transplantation (1989), 47(4), 592-5

CODEN: TRPLAU; ISSN: 0041-1337

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 08 Jul 1989

AB In order to evaluate the effect of platelet-activating factor (PAF) antagonist BN 52021 (5 mg/kg i.v.) on cyclosporine (CsA, 50 mg/kg i.v.) nephrotoxicity, euvolemic rats were submitted to nephron micropuncture studies. BN 52021 alone did not change the total (1.08 vs. 1.04 mL/min) or single-nephron (SN) (29.1 vs. 31.3 nL/min) glomerular filtration rate (GFR). CsA caused a decline in GFR (0.47 vs. 0.96 mL/min) and on SNGFR (14.0 vs. 27.9 nL/min). An increase in afferent (RA) and efferent (RE) arteriolar resistances by 180% and 360%, resp., decreased glomerular plasma flow rate (QA) from 100.99 to 44.37 nL/min. The glomerular **ultrafiltration** coefficient (KF) declined by 70% (0.096 to 0.031 mL/s mmHg). Pretreatment with BN 52021 in rats treated with CsA blunted the nephrotoxic effects on superficial nephrons. The SNGFR QA, and KF remained unaltered. The total renal function decrease was not prevented by BN 52021. Thus, PAF may participate in CsA nephrotoxicity. The protective effect of BN 52021 on superficial nephrons indicates that BN 52021 can minimize the impairment of renal function induced by CsA.

CC 1-7 (Pharmacology)

IT 15291-77-7, BN 52021

RL: BIOL (Biological study)

(cyclosporine nephrotoxicity prevention by)

L25 ANSWER 18 OF 18 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1987:135265 HCAPLUS

DOCUMENT NUMBER: 106:135265

TITLE: Comparison of proanthocyanidins and related compounds in leaves and leaf-derived cell cultures of **Ginkgo biloba** L., **Pseudotsuga menziesii** Franco, and **Ribes sanguineum** Pursh

AUTHOR(S): Stafford, Helen A.; Kreitlow, Kelly S.; Lester, Hope H.

CORPORATE SOURCE: Biol. Dep., Reed Coll., Portland, OR, 97202, USA

SOURCE: Plant Physiology (1986), 82(4), 1132-8

CODEN: PLPHAY; ISSN: 0032-0889

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 01 May 1987

AB Proanthocyanidins, flavan-3-ols, and their flavonoid precursors in leaves and leaf-derived callus and cell suspension cultures have been isolated and analyzed by HPLC with C18 columns, paper chromatog., and by chemical and spectrophotometric methods. Cultures of **Ginkgo biloba** and **Pseudotsuga menziesii** (Douglas-fir) produced much greater amts. of proanthocyanidins

than leaves per mg dry weight. In cultures, however, the prodelphinidin component relative to that of procyanidins decreased: this was most pronounced in *Pseudotsuga*. In contrast, callus cultures of *Ribes sanguineum* accumulated proanthocyanidins in amts. about equal to those in intact leaves per mg dry weight and the prodelphinidin **content** remained **high**. Although *Ginkgo* and *Ribes* leaves contained major amts. of flavan-3-ols and dimers with the 2,3-cis-stereochem., their cultures tended to synthesize 2,3-trans-isomers instead. Glycosides of flavanone and 3-hydroxyflavanone precursors accumulated in medium to **high amts.** on a dry weight basis in leaves and cultures of *Ribes* and *Pseudotsuga*, and the 3'-glycosidic linkage predominated when the latter species was cultured with 2,4-dichlorophenoxyacetic acid rather than naphthaleneacetic acid.

- CC 11-1 (Plant Biochemistry)
- ST proanthocyanidin **Ginkgo** *Pseudotsuga* *Ribes*
- IT Plant tissue culture
 - (anthocyanidins in, of leaves of **Ginkgo** *biloba* and *Pseudotsuga* *menziesii* and *Ribes* *sanguineum*)
- IT Proanthocyanidins
 - RL: BIOL (Biological study)
 - (in leaves and leaf-derived cell cultures of **Ginkgo** *biloba* and *Pseudotsuga* *menziesii* and *Ribes* *sanguineum*)
- IT Flavonoids
 - Procyanidins
 - RL: BIOL (Biological study)
 - (in leaves of **Ginkgo** *biloba* and *Pseudotsuga* *menziesii* and *Ribes* *sanguineum*)
- IT **Ginkgo** *biloba*
 - (proanthocyanidins in leaves and leaf cell cultures of)
- IT Leaf
 - (proanthocyanidins in, of **Ginkgo** *biloba* and *Pseudotsuga* *menziesii* and *Ribes* *sanguineum*)
- IT Plant hormones and regulators
 - RL: BIOL (Biological study)
 - (auxins, proanthocyanidins in leaves of **Ginkgo** *biloba* and *Pseudotsuga* *menziesii* and *Ribes* *sanguineum* response to)
- IT **Glycosides**
 - RL: BIOL (Biological study)
 - (**flavonoid**, in leaves of **Ginkgo** *biloba* and *Pseudotsuga* *menziesii* and *Ribes* *sanguineum*)
- IT 27200-12-0, Dihydromyricetin
 - RL: BIOL (Biological study)
 - (as procyanidin precursor in **Ginkgo** *biloba*)
- IT 154-23-4, Catechin 490-46-0, Epicatechin 970-73-0, Gallocatechin 970-74-1, Epigallocatechin
 - RL: BIOL (Biological study)
 - (in leaves and leaf-derived culture of **Ginkgo** *biloba* and *Pseudotsuga* *menziesii* and *Ribes* *sanguineum*)
- IT 86-87-3, Naphthaleneacetic acid 94-75-7, 2,4-Dichlorophenoxyacetic acid, biological studies
 - RL: BIOL (Biological study)
 - (proanthocyanidins in leaves and cultures of **Ginkgo** *biloba* and *Pseudotsuga* *menziesii* and *Ribes* *sanguineum* response to)

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L1	1087	SEA FILE=WPIDS	ABB=ON	PLU=ON	GINKGO
L2	373214	SEA FILE=WPIDS	ABB=ON	PLU=ON	EXT## OR EXTRACT?
L3	686	SEA FILE=WPIDS	ABB=ON	PLU=ON	L1 (S) L2
L4	8478	SEA FILE=WPIDS	ABB=ON	PLU=ON	ULTRAFILT?
L5	3	SEA FILE=WPIDS	ABB=ON	PLU=ON	L3 AND L4
L6	77	SEA FILE=WPIDS	ABB=ON	PLU=ON	TERPENLACTONE? OR TERPEN? (3A)
					LACTONE?
L7	639	SEA FILE=WPIDS	ABB=ON	PLU=ON	TERPENOID#
L8	348	SEA FILE=WPIDS	ABB=ON	PLU=ON	GLYCOSIDE# (S) (FLAVON?)
L9	4	SEA FILE=WPIDS	ABB=ON	PLU=ON	L1 AND (L7 AND L8)
L10	61858	SEA FILE=WPIDS	ABB=ON	PLU=ON	(HIGH OR LARGE) (3A) (AMOUNT OR
					AMT## OR CONTENT)
L11	21	SEA FILE=WPIDS	ABB=ON	PLU=ON	L1 AND L10
L12	1	SEA FILE=WPIDS	ABB=ON	PLU=ON	L11 AND (L6 OR L7) AND L8
L13	8	SEA FILE=WPIDS	ABB=ON	PLU=ON	L11 AND (L6 OR L7 OR L8)
L14	13	SEA FILE=WPIDS	ABB=ON	PLU=ON	L5 OR L9 OR L12 OR L13

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L14 ANSWER 1 OF 13 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 2005-021850 [03] WPIDS
 DNC C2005-007431
 TI Method of extracting **terpene lactone** from folium
ginkgo leaves and product.
 DC B03
 IN DAI, B; GONG, T; QIAN, J
 PA (SANJ-N) SANJIANGYUAN PHARM CO LTD SUZHOU CITY
 CYC 1
 PI CN 1530363 A 20040922 (200503)*

ADT CN 1530363 A CN 2003-119744 20030311

PRAI CN 2003-119744 20030311

AB CN 1530363 A UPAB: 20050112

NOVELTY - A process for extracting terpenoid ginkalide from **ginkgo** leaf and a product which is prepared by extracting in alcohol and resin concentrating and has **high content** of ginkalide are disclosed. Its advantages are low cost and less environmental pollution. Said product can be used for treating senile dementia and cardiovascular and cerebrovascular diseases.

Dwg.0/0

L14 ANSWER 2 OF 13 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2004-507689 [48] WPIDS

DNC C2004-187877

TI Preparation of organic **extract** of **Ginkgo** with specific contents of total flavone and ginkgolide and water solubility, for use in pharmaceuticals and foods for preventing or treating e.g. heart or brain diseases.

DC B02

IN FU, Y

PA (PROH-N) PRO-HERB GMBH

CYC 100

PI WO 2004056792 A1 20040708 (200448)* ZH 18

RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU
MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT
RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM
ZW

AU 2002349731 A1 20040714 (200474)

ADT WO 2004056792 A1 WO 2002-CN802 20021111; AU 2002349731 A1 AU 2002-349731
20021111, WO 2002-CN802 20021111

FDT AU 2002349731 A1 Based on WO 2004056792

PRAI WO 2002-CN802 20021111

AB WO2004056792 A UPAB: 20040728

NOVELTY - A **Ginkgo extract** contains not less than 12 weight% total flavone and not less than 4 weight% ginkgolide with respect to the effective ingredients, which has water solubility of not less than 1.2 g/100 ml.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method for preparing the **Ginkgo extract** by using water without organic solvents and heavy metal salts comprising soaking **Ginkgo** leaves in saturated lime water then **extracting** with pure water, filtering the aqueous **extract** and osmosis to remove polymers, and adsorption chromatography of the filtrate to eliminate allergenic substances like alkylphenols.

ACTIVITY - Cardiant; Cerebroprotective.

MECHANISM OF ACTION - None given in source material.

USE - The extracts are for use in pharmaceuticals and foods (both claimed) for preventing or treating e.g. heart or brain diseases, particularly in the forms of drugs, quasi medicines, healthcare products, food-additives and cosmetics.

ADVANTAGE - Such extracts are free from organic solvents and heavy metals, and reduced in allergenic ginkgolic acids.

Dwg.0/3

TECH UPTX: 20040728

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred **Extracts**: The content of ginkgolic acids in such **extract** is not more than 5

ppm and that of lead is not more than 3 ppm particularly free of lead. Preferred Process: The water used is ionized water obtained by electroionization treatment, which has pH at 7-10. The **ultrafiltration** is conducted for grading the **extract** into molecule weights of 10,000, 6,000 and 2,000 with use of the respective **ultrafiltration** membranes. Pressure applied during the osmotic filtration is 4.5 MPa. The adsorption column is a large-bore resin or active charcoal column, preferably an active charcoal column which is made from **Ginkgo** shells.

L14 ANSWER 3 OF 13 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 2004-441522 [42] WPIDS
 DNC C2004-165662
 TI Preparation of ginkgo leaf powder for injection comprises eliminating macro molecules, pyretogen, particle, microbe and other impurities.
 DC B04
 IN DAI, J; LI, X; PENG, G
 PA (JIAN-N) JIANGSU YANGZI PHARM IND GROUP CORP LTD
 CYC 1
 PI CN 1486715 A 20040407 (200442)*
 ADT CN 1486715 A CN 2003-131959 20030623
 PRAI CN 2003-131959 20030623
 AB CN 1486715 A UPAB: 20040702
 NOVELTY - The **ginkgo** leaf powder for injection contains **ginkgo extract** 1 (weight portions), hydroxypropyl betacyclodextrin 1-4 and pH regulator meglumine or sodium bicarbonate 0.02-0.08. The process includes mixing **ginkgo extractive**, hydroxypropyl betacyclodextrin and pH regulator; filtering and **ultrafiltering** and direct bacteria-free freeze drying or spray drying of the **ultrafiltered** liquid.
 DETAILED DESCRIPTION - The **ginkgo** leaf powder for injection contains **ginkgo extractive** 1 weight portions, hydroxypropyl betacyclodextrin 1-4 weight portions and pH regulator meglumine or sodium bicarbonate 0.02-0.08 weight portions. The preparation process includes mixing **ginkgo extractive**, hydroxypropyl betacyclodextrin and pH regulator; filtering and **ultrafiltering** with 50000-150000 dalton **ultrafiltering** film; and direct bacteria-free freeze drying or spray drying of the **ultrafiltered** liquid to obtain the powder for injection. The said preparation process of the present invention can maintain fully the effective components while eliminating macro molecules, pyretogen, particle, microbe and other impurities to raise the safety and stability of the preparation obviously.
 Dwg.0/0

L14 ANSWER 4 OF 13 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 2004-000224 [01] WPIDS
 DNC C2004-000159
 TI **High content ginkgo extract** and process for producing same.
 DC B04
 IN GUAN, G; SHI, Y; YANG, Y
 PA (SHIY-I) SHI Y
 CYC 1
 PI CN 1435424 A 20030813 (200401)*
 ADT CN 1435424 A CN 2003-117443 20030313
 PRAI CN 2003-117443 20030313
 AB CN 1435424 A UPAB: 20040102
 NOVELTY - A **high-content ginkgo extract** for invigorating the pulse-beat and promoting blood circulation contains

flavone glycoside (31-40%) and lactone (11-15%) and is prepared from **ginkgo** leaf through extracting in 60% acetone, vacuum concentrating, depositing in water, centrifugal separation, chromatography, separating by ionic exchange column, eluting, collecting and refining. Its advantages are high curative effect and low cost.
Dwg.0/0

L14 ANSWER 5 OF 13 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2003-789494 [75] WPIDS
DNC C2003-218067
TI Extractant, extraction process and analysis method of high-activity **ginkgo** leaf extractive.
DC B04
IN HU, W; XIE, B; YANG, E
PA (UYMI-N) UNIV MID-CHINA AGRIC
CYC 1
PI CN 1436784 A 20030820 (200375)*
ADT CN 1436784 A CN 2002-115533 20020207
PRAI CN 2002-115533 20020207
AB CN 1436784 A UPAB: 20031120
NOVELTY - The present invention is extractant, extraction process and analysis method of high-activity **ginkgo** leaf extractive. The key point of the present invention is one developed extractant for water extraction process of ginkgetin and EGb and the process has no step of eliminating ginkolic acid. These also includes one efficient liquid-phase chromatographic method for the quantitative analysis of ginkolic acid with secondary chemical balance. The product contains total **flavone glycoside** 24-32%, total **terpenoid** lactone 6-13%, protocyanidine 8-14% and ginkolic acid less than 5 ppm, and has yield of 2.8-3.6%. The extractant has low cost, small consumption, no residue, high stripping rate of **flavones**, **terpenoid** lactones and protocyanidin compound and has stripping of ginkolic acid.
Dwg.0/0

L14 ANSWER 6 OF 13 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2002-241610 [29] WPIDS
DNC C2002-072682
TI Composition useful for inhibiting angiogenesis comprises ticlopidine and **Ginkgo** biloba extract.
DC B03 B04
IN KIM, M Y; MUN, C H; PARK, B Y; KIM, M; MOON, C; PARK, B; MOON, C H
PA (ANGI-N) ANGIOLAB INC; (KIMM-I) KIM M; (MOON-I) MOON C; (PARK-I) PARK B
CYC 96
PI WO 2002009708 A1 20020207 (200229)* EN 12
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KZ
LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD
SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001075809 A 20020213 (200238)
KR 2002010230 A 20020204 (200254)
US 2003165586 A1 20030904 (200359)
ADT WO 2002009708 A1 WO 2001-KR1280 20010727; AU 2001075809 A AU 2001-75809
20010727; KR 2002010230 A KR 2000-43589 20000728; US 2003165586 A1 WO
2001-KR1280 20010727, US 2003-343146 20030127
FDT AU 2001075809 A Based on WO 2002009708
PRAI KR 2000-43589 20000728
AB WO 200209708 A UPAB: 20020508
NOVELTY - A composition comprises ticlopidine and **Ginkgo** biloba

extract for inhibiting angiogenesis.

ACTIVITY - Antiseborrheic; Dermatological; Antiarthritic; Antidiabetic; Ophthalmological; Antipsoriatic; Vasotropic; Antiinflammatory; Cytostatic; Anti-angiogenic.

MECHANISM OF ACTION - Angiogenesis inhibitor.

Human umbilical vein endothelial cells (HUVECs) were isolated from cords digested with 0.1% collagenase (Grant D S, et al., Cell, 58, 933-943(1989)). The cells were grown in M199 medium containing 20% fetal bovine serum, ECGS, heparin and penicillin-streptomycin. Cells between 3 - 5 passages were used for the test. The tube formation assay was performed by coating 48-well plates with Matrigel (0.2 ml) and incubated at 37 deg. C for 1 hour. 4-6 multiply 104 HUVECs resuspended in M199 medium were added to each well. Ticlopidine and **Ginkgo biloba** extract, a standardized extract containing 24% **flavonoid glycosides** and 6% **terpenoid** (test) were added to the Matrigel. The final concentration of ticlopidine was (25 mu M) and **Ginkgo biloba** extract was (5 mu g/ml). A control (A) was prepared without ticlopidine and **Ginkgo biloba** extract. Ticlopidine (B) and **Ginkgo biloba** extract (C) alone were also used as the controls. The total tube area (%) for the test/controls (A)/(B)/(C) was 66/100/91/89 respectively. The results showed that the test had an inhibitory effect on the HUVEC tube formation, which was higher than that of the controls.

USE - In the manufacture of a medicine for inhibiting angiogenesis; for treating a disease such as angioma, angiofibroma, arthritis, diabetic retinopathy, premature infant's retinopathy, neovascular glaucoma, corneal disease, involutional macula, degeneration of macula, pterygium, retinal degeneration, retrolental fibroplasias, granular conjunctivitis, psoriasis, telangiectasis, pyogenic granuloma, seborrheic dermatitis, acne, cancer and metastasis (all claimed).

ADVANTAGE - The composition shows synergistic effects of enhancing anti-angiogenic activity beyond the level expected when ticlopidine or **Ginkgo biloba** extract is used alone and reducing the cellular toxicity of ticlopidine. The composition does not cause any adverse side-effects and provides a quick, sustained or delayed release of the active ingredient after its administration to a mammal.

Dwg.0/1

TECH

UPTX: 20020508

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Composition: The composition comprises (wt.%): ticlopidine (30 - 90) and **Ginkgo biloba** extract (10 - 70).

L14 ANSWER 7 OF 13 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2001-418893 [45] WPIDS

DNC C2001-126894

TI Process for extracting ginkgolic total flavone.

DC B05

IN BA, W

PA (BAWW-I) BA W

CYC 1

PI CN 1293191 A 20010502 (200145)*

ADT CN 1293191 A CN 2000-129807 20001024

PRAI CN 2000-129807 20001024

AB CN 1293191 A UPAB: 20010813

NOVELTY - A process for extracting **ginkgo** total flavone includes such steps as defatting, preparing the deposit of **flavonoid**, displacing **flavone**, recovering alcohol and drying. Its advantages are high purity upto 49.8% of **flavone glycoside content**, simple operation, and **high** safety and speed.

Dwg.0/0

L14 ANSWER 8 OF 13 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2000-117739 [11] WPIDS
DNC C2000-036253
TI Water-soluble dry plant extracts, useful in medicines, cosmetics or
dietetic foods.
DC B04 D13 D21
IN GRETHLEIN, E; OSCHMANN, R; ERDELMEIER, C; STUMPF, K; SUDECK, A
PA (SCHW-N) SCHWABE GMBH & CO WILLMAR
CYC 23
PI DE 19829516 A1 20000105 (200011)* 7
WO 2000001397 A1 20000113 (200011) GE
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: AU CA JP US
AU 9954069 A 20000124 (200027)
EP 1089748 A1 20010411 (200121) GE
R: AT BE CH DE ES FR GB IT LI NL
AU 745660 B 20020328 (200235)
JP 2002519383 W 20020702 (200246) 20
EP 1089748 B1 20030604 (200344) GE
R: AT BE CH DE ES FR GB IT LI NL
DE 59905853 G 20030710 (200347)
DE 19829516 B4 20040826 (200456)
ADT DE 19829516 A1 DE 1998-1029516 19980702; WO 2000001397 A1 WO 1999-DE1812
19990619; AU 9954069 A AU 1999-54069 19990619; EP 1089748 A1 EP
1999-939923 19990619, WO 1999-DE1812 19990619; AU 745660 B AU 1999-54069
19990619; JP 2002519383 W WO 1999-DE1812 19990619, JP 2000-557843
19990619; EP 1089748 B1 EP 1999-939923 19990619, WO 1999-DE1812 19990619;
DE 59905853 G DE 1999-505853 19990619, EP 1999-939923 19990619, WO
1999-DE1812 19990619; DE 19829516 B4 DE 1998-1029516 19980702
FDT AU 9954069 A Based on WO 2000001397; EP 1089748 A1 Based on WO 2000001397;
AU 745660 B Previous Publ. AU 9954069, Based on WO 2000001397; JP
2002519383 W Based on WO 2000001397; EP 1089748 B1 Based on WO 2000001397;
DE 59905853 G Based on EP 1089748, Based on WO 2000001397
PRAI DE 1998-19829516 19980702
AB DE 19829516 A UPAB: 20000301
NOVELTY - New water-soluble, native dry **extracts** (I) of plant
parts, especially **Ginkgo biloba** leaves, consist entirely of
contents of the plant parts and are free from solubilizers and galenic
auxiliaries.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for the
preparation of (I).
ACTIVITY - None given.
MECHANISM OF ACTION - None given.
USE - (I) are used for the preparation of medicines, cosmetics and/or
dietetic foods (all claimed). No details of specific applications are
given.
ADVANTAGE - (I) is completely water-soluble; has a **high**
content of the relevant active components (specifically
terpenoids and **flavone glycosides** in the case
of **Ginkgo biloba** leaf **extracts**); is free of additives
(which could cause problems such as complexing and inhibition of release of
gingkolides); can be prepared simply and inexpensively; and specifically
may have higher percentage content of **terpene lactones**
and **flavone glycosides** than the crude drug (claimed).
Dwg.0/1
TECH UPTX: 20000301
TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Extract: (I) is:
(i) a dried primary extract (crude extract);
(ii) a dry extract which has been partially purified by removal of

extraction solvents and components which precipitate from aqueous solution in the cold; or

(iii) a dry extract which has been purified as in (b) and further purified by removal of unwanted components by precipitation reactions, adsorption and desorption, extraction with butanol or other purification methods.

Specifically (I) contains (by weight) at least 20 % **flavone**

glycosides, at least 5 % **terpene lactones** and

at most 5 ppm ginkgolic acids; or at least 22-27 % **flavone**

glycosides, at least 5-7 % **terpene lactones**,

at least 2.8-3.4 % ginkgolides A, B and C, at least 2.6-3.2% bilobalides

and at most 5 ppm ginkgolic acids.

Preparation: Claimed preparation of (I) involves:

(a) preparing a liquid aqueous alcoholic extract or dry extract by conventional methods;

(b) taking up the extract (if dry) in water and/or organic solvent, preferably in aqueous alcohol;

(c) subjecting the (preferably aqueous alcoholic) extract solution to **ultrafiltration** through a filter having an average pore size of 2000-10000 Daltons; and

(d) separating the organic solvent(s) and optionally drying the **ultrafiltrate**.

Preferably stage (a) involves obtaining a crude extract by extracting the plant parts with aqueous alcohol or aqueous ketone, removing the extraction solvent, removing unwanted (specifically lipophilic) components by precipitation using addition of water and cooling, and further purifying to remove unwanted components and enrich the desired components (by precipitation reactions, adsorption and desorption, extraction with butanol or other purification methods), removing the solvent(s) and drying.

L14 ANSWER 9 OF 13 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1997-294865 [27] WPIDS

DNC C1997-095224

TI Glutathione-S-transferase containing Ginkgo biloba leaves - is useful for glutathione-S-transferase activating food, drinks or pharmaceuticals.

DC B04 D13

PA (NIGR-N) NIPPON GREEN WAVE KK

CYC 1

PI JP 09110713 A 19970428 (199727)* 5

ADT JP 09110713 A JP 1995-265843 19951013

PRAI JP 1995-265843 19951013

AB JP 09110713 A UPAB: 19970702

Glutathione-S-transferase activator comprises extract of **Ginkgo** biloba leaves. Also claimed are: (A) a glutathione-S-transferase activator comprising bilohalide; (B) a glutathione-S-transferase activator comprising ginkgolide A; and (C) a glutathione-S-transferase activator comprising an extract of Ginkgo biloba leaves and bilohalide, ginkgolide A, or th both. **USE/ADVANTAGE** - Used for glutathione-S-transferase activating food and drinks or pharmaceuticals. The activator prevents cancer. In an example, to crushed dry Ginkgo biloba leaves (500g), 70% aqueous ethanol (2500 ml) was added. The mixture was heated to 50 deg.C for 30 hours and filtered to give a first extract and a first extraction residue. To the first extraction residue, 70% aqueous etanol (2000ml) was added. The mixture was heated to 50 deg.C for 3 hours and filtered to give a second extract and a second extraction residue. To the second extraction residue, 70% aqueous ethanol (2000ml) was added, and the mixture was heated to 50 deg.C for 3 hours and filtered to give a third extract and a third extraction residue. The first, second, and third extract were mixed (total 6000ml) and concentrated under reduced pressure to approximately 500ml. To the concentrate water (500ml) was added and the mixture was

stirred and filtered to separate the precipitated hydrophobic substances. The resulting filtrate was loaded onto a column packed with unsubstituted porous resin (HP-20) (500ml) to adsorb the desired extract. The column was washed with water (1000ml). The extract was eluted with 70% aqueous ethanol (1000ml). The eluant (1000ml) was concentrated to dryness under reduced pressure to give the extract of *Ginkgo biloba* leaves (15g) containing **flavone glycoside** (24%) and **terpenoid** (6%).
Dwg.0/0

L14 ANSWER 10 OF 13 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
AN 1991-172350 [24] WPIDS
DNC C1991-074470

TI Extracts from *Ginkgo biloba* leaves - with **high content of flavone glycoside(s)** and ginkgolide(s) but with low alkyl phenol(s) content.

DC B04

IN SCHWABE, K P

PA (SCHW-N) SCHWABE W & CO GMBH

CYC 1

PI DE 3940095 A 19910606 (199124)*

ADT DE 3940095 A DE 1989-3940095 19891204

PRAI DE 1989-3940095 19891204

AB DE 3940095 A UPAB: 19930928

Novel extracts from the leaves of *Ginkgo biloba* are practically free from alkyl phenols, have a **high content of flavone glycosides** and contain most of the ginkgolides and bilobalide originally present in the leaves.

Pref. the extracts contain 14-22 (especially 16-18) weight% **flavone glycosides**, 1.6-3wt.% total ginkgolides A, B, C and J, 1.4-2.7 weight% bilobalide and less than 10 ppm (especially less than 1 ppm) alkyl phenols.

USE/ADVANTAGE - The extracts promote circulation, inhibit ischaemic damage and aggregation of radical acceptors and thrombocytes. The extracts are especially useful in the therapy of peripheral and cerebral arterial disorders of the circulation. Removal of the alkyl phenols (which are associated with allergies) is achieved without the need to use the chlorinated hydrocarbons necessary in previous processes and thus the associated risks to the environment and the presence of residues in the pharmaceutical are avoided.

0/0

L14 ANSWER 11 OF 13 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
AN 1991-172349 [24] WPIDS
DNC C1991-074469

TI Enriched extracts of *Ginkgo biloba* - with **high flavone glycoside content**, and opt. **high Ginkgolide(s) content** and opt. **high bilobalide content**.

DC B04

IN JAGGY, H; O'REILLY, J; O'REILLY, J

PA (MONT-N) MONTANA LTD; (WALL-N) WALLINGSTOWN CO LTD

CYC 18

PI DE 3940094 A 19910606 (199124)*

EP 436129 A 19910710 (199128)

R: AT BE CH DE ES FR GB GR IT LI LU NL SE

CA 2031384 A 19910605 (199133)

JP 03264533 A 19911125 (199202)

DE 3940094 C 19920702 (199227) 6

US 5389370 A 19950214 (199512) 6

EP 436129 B1 19950412 (199519) EN 10
 R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
 DE 69018601 E 19950518 (199525)
 ES 2070981 T3 19950616 (199531)
 JP 2503107 B2 19960605 (199627) 6
 KR 175067 B1 19990201 (200039)
 CA 2031384 C 20020625 (200252) EN
 ADT DE 3940094 A DE 1989-3940094 19891204; EP 436129 A EP 1990-123140
 19901203; JP 03264533 A JP 1990-400222 19901203; DE 3940094 C DE
 1989-3940094 19891204; US 5389370 A Cont of US 1990-623861 19901204, US
 1992-909137 19920706; EP 436129 B1 EP 1990-123140 19901203; DE 69018601 E
 DE 1990-618601 19901203, EP 1990-123140 19901203; ES 2070981 T3 EP
 1990-123140 19901203; JP 2503107 B2 JP 1990-400222 19901203; KR 175067 B1
 KR 1990-19827 19901204; CA 2031384 C CA 1990-2031384 19901203
 FDT DE 69018601 E Based on EP 436129; ES 2070981 T3 Based on EP 436129; JP
 2503107 B2 Previous Publ. JP 03264533

PRAI DE 1989-3940094 19891204

AB DE 3940094 A UPAB: 19970502

Novel extracts from the leaves of **Ginkgo biloba** contain 40-60
 (pref. 45-55)% **flavone glycosides**, 5.5-8.0 (pref.
 7.0)% ginkgolides A, B, C and J, 5.0-7.0 (pref. 6.0)% bilobalide, less
 than 10% proanthocyanidines and at most 10 ppm (pref. less than 1 ppm)
 alkyl phenols.

Extracts of the above composition but containing less than 0.1%
 bilobalide, or (c) of the above compsn. but containing at most 0.1%
 ginkgolides are also new.

USE/ADVANTAGE - The extracts can be used in the therapy of peripheral
 and cerebral arterial disorders of the circulation (extract (A)) in the
 therapy of illnesses in which the platelet activating factor plays a
 pathogenic (extract (B)) and against demyelinating neuropathia and brain
 oedema (extract (C)). The enriched concentrates can be used in smaller
 daily doses than previous extracts and can be used in countries with high
 requirements of pharmaceutical quality. Removal of ineffective components
 in the safety of use and allows for more exact analytical determination of
 the main components. The low content of alkyl phenols means there is
 practically no danger of allergic reactions. @ (6pp Dwg.No.0/0)

L14 ANSWER 12 OF 13 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1991-172348 [24] WPIDS

DNC C1991-074468

TI Extracts from **Ginkgo biloba** leaves - with **high**
content of flavone glycoside(s) and
 ginkgolide(s) but with low alkyl phenol(s) content.

DC B04

IN SCHWABE, K P; SCHWABE, K

PA (SCHW-N) SCHWABE W & CO GMBH; (SCHW-N) SCHWABE GMBH & CO WILLMAR

CYC 19

PI DE 3940092 A 19910606 (199124)*

EP 431536 A 19910612 (199124)

R: AT BE CH DE ES FR GB GR IT LI LU NL SE

CA 2031386 A 19910605 (199133)

DE 3940092 C 19910919 (199138)

JP 03279332 A 19911210 (199204)

ES 2024399 A 19920301 (199214)

US 5322688 A 19940621 (199424) 5

JP 07025687 B2 19950322 (199516) 5

EP 431536 B1 19950719 (199533) EN 7

R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE

DE 69021019 E 19950824 (199539)

ES 2024399 T3 19950916 (199543)

BR 1100103 A3 19970819 (199739)
 KR 185575 B1 19990501 (200052)
 ADT DE 3940092 A DE 1989-3940092 19891204; EP 431536 A EP 1990-123142
 19901203; JP 03279332 A JP 1990-400221 19901203; US 5322688 A Cont of US
 1990-624177 19901204, US 1992-899016 19920615; JP 07025687 B2 JP
 1990-400221 19901203; EP 431536 B1 EP 1990-123142 19901203; DE 69021019 E
 DE 1990-621019 19901203, EP 1990-123142 19901203; ES 2024399 T3 EP
 1990-123142 19901203; BR 1100103 A3 BR 1996-1100103 19961219; KR 185575 B1
 KR 1990-19826 19901204
 FDT JP 07025687 B2 Based on JP 03279332; DE 69021019 E Based on EP 431536; ES
 2024399 T3 Based on EP 431536
 PRAI DE 1989-3940092 19891204
 AB DE 3940092 A UPAB: 19930928

Novel extracts from the leaves of **Ginkgo biloba** are practically
 free from alkyl phenols, have a **high content** of
flavone glycosides and contain most of the ginkgolides
 and bilobalide originally present in the leaves.

Pref. the extracts contain 20-30 (especially 22-26) weight% flavone
 glycosids,
 2.5-4.6 weight% total ginkgolides A, B, C and J, 2.0-4.0 weight% bilobalide,
 less than 10 ppm (especially less than 1 ppm) alkyl phenols and less than 10
 weight% proanthocyanidine.

USE/ADVANTAGE - The extracts promote circulation, inhibit ischaemic
 damage and aggregation of radical acceptors and thrombocytes. The extracts
 are especially useful in the therapy of peripheral and cerebral arterial
 disorders of the circulation. Removal of the alkyl phenols (which are
 associated with allergies) is achieved without the need to use the
 chlorinated hydrocarbons necessary in previous processes and thus the
 associated risks to the environment and the presence of residues in the
 pharmaceutical are avoided. Removal of tannin-like substances
 (proanthocyanidine) achieved without the need to use lead cpds, thus
 reducing health risks to the work force and reducing costs.
 0/0

L14 ANSWER 13 OF 13 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1991-172347 [24] WPIDS

DNC C1991-074467

TI Extracts from **Ginkgo biloba** leaves - with **high**
content of **flavone glycoside(s)** and
 ginkgolide(s) and bilobalide but with low alkyl phenol(s) content.

DC A96 B04

IN SCHWABE, K P

PA (SCHW-N) SCHWABE W GMBH; (SCHW-N) SCHWABE W & CO GMBH

CYC 18

PI DE 3940091 A 19910606 (199124)*

EP 431535 A 19910612 (199124)

R: AT BE CH DE ES FR GB GR IT LI LU NL SE

CA 2031385 A 19910605 (199133)

DE 3940091 C 19910919 (199138)

JP 03279331 A 19911210 (199204)

ES 2024400 A 19920301 (199214)

EP 431535 B1 19940302 (199409) EN 12

R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE

DE 69007035 E 19940407 (199415)

ES 2024400 T3 19940416 (199419)

US 5399348 A 19950321 (199517) 5

JP 07076176 B2 19950816 (199537) 5

KR 154977 B1 19981116 (200029)

CA 2031385 C 20010918 (200157) EN

ADT DE 3940091 A DE 1989-3940091 19891204; EP 431535 A EP 1990-123141

19901203; JP 03279331 A JP 1990-400220 19901203; EP 431535 B1 EP
1990-123141 19901203; DE 69007035 E DE 1990-607035 19901203, EP
1990-123141 19901203; ES 2024400 T3 EP 1990-123141 19901203; US 5399348 A
Cont of US 1990-625729 19901204, US 1992-905167 19920624; JP 07076176 B2
JP 1990-400220 19901203; KR 154977 B1 KR 1990-19825 19901204; CA 2031385 C
CA 1990-2031385 19901203

FDT DE 69007035 E Based on EP 431535; ES 2024400 T3 Based on EP 431535; JP
07076176 B2 Based on JP 03279331

PRAI DE 1989-3940091 19891204

AB DE 3940091 A UPAB: 19930928

Novel extracts from the leaves of **Ginkgo biloba** are practically
free from alkyl phenols, have a **high content** of
flavone glycosides and contain most of the ginkgolides
and bilobalide originally present in the leaves.

Pref. the extracts contain 20-30 (especially 22-26) weight% **flavone
glycosides**, 2.5-4.5 weight% total ginkgolides A, B, C and J, 2.0-4.0
weight% bilobalide, less than 10 ppm (especially less than 1 ppm) alkyl
phenols and
less than 10 weight% proanthocyanidine.

USE/ADVANTAGE - The extracts promote circulation, inhibit ischaemic
damage and aggregation of radical acceptors and thrombocytes. The extracts
are especially useful in the therapy of peripheral and cerebral arterial
disorders of the circulation. Removal of the alkyl phenols (which are
associated with allergies) is achieved without the need to use the
chlorinated hydrocarbons necessary in previous processes, and thus the
associated risks to the environment and potential residues in the phenol
are avoided.

0/0

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=> fil medline embase

FILE 'MEDLINE' ENTERED AT 12:14:49 ON 18 APR 2005

FILE 'EMBASE' ENTERED AT 12:14:49 ON 18 APR 2005

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=> d que 156

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L19      2642 SEA FILE=EMBASE ABB=ON  PLU=ON  GINKGO BILOBA EXTRACT/CT
L20      11822 SEA FILE=EMBASE ABB=ON  PLU=ON  ULTRAFILT?
L22      10972 SEA FILE=EMBASE ABB=ON  PLU=ON  FLAVON?
L23      14577 SEA FILE=EMBASE ABB=ON  PLU=ON  GLYCOSIDE?
L24      4670 SEA FILE=EMBASE ABB=ON  PLU=ON  TERPEN?
L25      10199 SEA FILE=EMBASE ABB=ON  PLU=ON  LACTON?
L26      89 SEA FILE=EMBASE ABB=ON  PLU=ON  L19 AND (L22 OR L23) AND (L24
OR L25)
L27      116564 SEA FILE=EMBASE ABB=ON  PLU=ON  (HIGH OR INCREASE?) (S)
(CONTENT OR AMOUNT OR AMT#)
L29      6833 SEA FILE=EMBASE ABB=ON  PLU=ON  FILTRATION/CT
L31      41413 SEA FILE=EMBASE ABB=ON  PLU=ON  DRUG ISOLATION/CT
L32      10 SEA FILE=EMBASE ABB=ON  PLU=ON  L31 AND L26
L33      77 SEA FILE=EMBASE ABB=ON  PLU=ON  L19 AND L31
L34      1 SEA FILE=EMBASE ABB=ON  PLU=ON  L33 AND (L29 OR L20)
L35      1 SEA FILE=EMBASE ABB=ON  PLU=ON  L27 AND L33
L36      161 SEA FILE=EMBASE ABB=ON  PLU=ON  TERPENE AND FLAVONOID
L37      7 SEA FILE=EMBASE ABB=ON  PLU=ON  L36 AND L33
L38      10 SEA FILE=EMBASE ABB=ON  PLU=ON  L32 OR L34 OR L35 OR L37
L40      711 SEA FILE=MEDLINE ABB=ON  PLU=ON  GINKGO BILOBA /CT
L42      7906 SEA FILE=MEDLINE ABB=ON  PLU=ON  LACTONES/CT
L43      143159 SEA FILE=MEDLINE ABB=ON  PLU=ON  TERPENES+NT/CT
L44      27780 SEA FILE=MEDLINE ABB=ON  PLU=ON  FLAVONOIDS+NT/CT
L48      12323 SEA FILE=MEDLINE ABB=ON  PLU=ON  L43 (L) (AN OR IP)/CT
L49      4441 SEA FILE=MEDLINE ABB=ON  PLU=ON  L44 (L) (AN OR IP)/CT
L50      1518 SEA FILE=MEDLINE ABB=ON  PLU=ON  GINKGO
L51      8 SEA FILE=MEDLINE ABB=ON  PLU=ON  L48 AND L49 AND L50
L52      1077 SEA FILE=MEDLINE ABB=ON  PLU=ON  L42 (L) (AN OR IP)/CT
L53      24 SEA FILE=MEDLINE ABB=ON  PLU=ON  L40 AND L52
L54      3 SEA FILE=MEDLINE ABB=ON  PLU=ON  L53 AND L44
L55      9 SEA FILE=MEDLINE ABB=ON  PLU=ON  L54 OR L51
L56      18 DUP REM L55 L38 (1 DUPLICATE REMOVED)

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=> d bib ab ct 1-18

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L56 ANSWER 1 OF 18      MEDLINE on STN
AN  2004306883      MEDLINE
DN  PubMed ID: 15186088
TI  Efficient 1H nuclear magnetic resonance method for improved quality
control analyses of Ginkgo constituents.
AU  Li Chia-Ying; Lin Chun-Hua; Wu Chia-Che; Lee Kuo-Hsiung; Wu Tian-Shung
CS  Department of Chemistry, National Cheng Kung University, Tainan 701,
Taiwan.
SO  Journal of agricultural and food chemistry, (2004 Jun 16) 52 (12) 3721-5.
Journal code: 0374755. ISSN: 0021-8561.
CY  United States
DT  Journal; Article; (JOURNAL ARTICLE)
LA  English
FS  Priority Journals
EM  200408
ED  Entered STN: 20040624
Last Updated on STN: 20040804

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Entered Medline: 20040803

AB We developed an analytical method using ¹H nuclear magnetic resonance (NMR) spectrometry to resolve analytical problems with **Ginkgo**. After a simple hydrolysis step, an NMR analysis of the terpene trilactone H-12 signals and the flavonol aglycone H-2' (or H-2'/6' for kaempferol) signals was performed. By comparing the solvent effects on the resolution of these signals, methanol-d₄-benzene-d₆ (65:35) was selected as the optimal ¹H NMR solvent. The amounts of terpene lactones and flavonol aglycones in various commercial **Ginkgo** products and **Ginkgo** leaves were determined. This newly developed ¹H NMR method enables the simultaneous analysis of terpene trilactones and flavonols and allows simple, rapid quantification of these compounds in pharmaceutical **Ginkgo** preparations.

CT **Flavonols: AN, analysis**
***Ginkgo biloba: CH, chemistry**
Lactones: AN, analysis
***Magnetic Resonance Spectroscopy: MT, methods**
Plant Leaves: CH, chemistry
Quality Control
Research Support, Non-U.S. Gov't
Terpenes: AN, analysis

L56 ANSWER 2 OF 18 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
 on STN

AN 2004213910 EMBASE

TI Inhibition of human P450 enzymes by multiple constituents of the Ginkgo biloba extract.

AU Gaudineau C.; Beckerman R.; Welbourn S.; Auclair K.

CS K. Auclair, Department of Chemistry, McGill University, 801 Sherbrooke Street West, Montreal, Que. H3A 2K6, Canada. karine.auclair@mcgill.ca

SO Biochemical and Biophysical Research Communications, (11 Jun 2004) Vol. 318, No. 4, pp. 1072-1078.

Refs: 47

ISSN: 0006-291X CODEN: BBRCA

PUI S 0006-291X(04)00909-X

CY United States

DT Journal; Article

FS 030 Pharmacology

037 Drug Literature Index

LA English

SL English

ED Entered STN: 20040617

Last Updated on STN: 20040617

AB The Ginkgo biloba extract EGb761 was tested for its ability to inhibit the major human cytochrome P450 enzymes (CYPs). The full extract was found to strongly inhibit CYP2C9 (K(i)=14±4µg/mL), and to a lesser extent, CYP1A2 (K(i)=106±24µg/mL), CYP2E1 (K(i)=127±42µg/mL), and CYP3A4 (K(i)=155±43µg/mL). The **terpenoidic** and **flavonoidic** fractions of the extract were tested separately against the same P450s to identify the source of inhibition by EGb761. The **terpenoidic** fraction inhibited only CYP2C9 (K(i)=15±6µg/mL) whereas the **flavonoidic** fraction of EGb761 showed high inhibition of CYP2C9, CYP1A2, CYP2E1, and CYP3A4 (K(i)'s between 4.9 and 55µg/mL). The **flavonoidic** fraction was further fractionated using extraction and chromatography. Inhibition studies indicated that the majority of these fractions inhibited P450s at a significant level (IC (50)<40µg/mL). .COPYRGT. 2004 Elsevier Inc. All rights reserved.

CT Medical Descriptors:
 enzyme inhibition

fractionation
 drug isolation
 chromatography
 statistical significance
 microsome
 medicinal plant
 Ginkgo biloba
 human
 controlled study
 human cell
 article
 priority journal
 Drug Descriptors:

***Ginkgo biloba extract: PD, pharmacology**
 *cytochrome P450: EC, endogenous compound
 cytochrome P450 2C9: EC, endogenous compound
 cytochrome P450 1A2: EC, endogenous compound
 cytochrome P450 2E1: EC, endogenous compound
 cytochrome P450 3A4: EC, endogenous compound
terpenoid derivative: PD, pharmacology
 flavanoid: PD, pharmacology

- L56 ANSWER 3 OF 18 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
 on STN
 AN 2004367716 EMBASE
 TI Inhibition of human cytochromes P450 by components of Ginkgo biloba.
 AU von Moltke L.L.; Weemhoff J.L.; Bedir E.; Khan I.A.; Harmatz J.S.; Goldman
 P.; Greenblatt D.J.
 CS L.L. von Moltke, Dept. of Pharmacol./Exp. Therapeut., Tufts University
 School of Medicine, 136 Harrison Avenue, Boston, MA 02111, United States.
 lisa.vonmoltke@tufts.edu
 SO Journal of Pharmacy and Pharmacology, (2004) Vol. 56, No. 8, pp.
 1039-1044.
 Refs: 43
 ISSN: 0022-3573 CODEN: JPPMAB
 CY United Kingdom
 DT Journal; Article
 FS 029 Clinical Biochemistry
 030 Pharmacology
 037 Drug Literature Index
 LA English
 SL English
 ED Entered STN: 20040916
 Last Updated on STN: 20040916
 AB The extraction, isolation and characterization of 29 natural products
 contained in Ginkgo biloba have been described, which we have now tested
 for their in-vitro capacity to inhibit the five major human cytochrome
 P450 (CYP) isoforms in human liver microsomes. Weak or negligible
 inhibitory activity was found for the **terpene** trilactones
 (ginkgolides A, B, C and J, and bilobalide), and the **flavonol**
glycosides. However 50% inhibitory activity (IC50) was found at
 concentrations less than 10 µg mL(-1) for the **flavonol**
 aglycones (kaempferol, quercetin, apigenin, myricetin, tamarixetin) with
 CYP1A2 and CYP3A. Quercetin, the biflavone amentoflavone, sesamin, as
 well as Z,Z)-4,4'-(1,4-pentadiene-1,5-diyl)diphenol and
 3-nonadec-8-enyl-benzene-1,2-diol, were also inhibitors of CYP2C9. The
 IC50 of amentoflavone for CYP2C9 was 0,019 µg mL(-1) (0.035 µM).
 Thus, the principal components of Ginkgo biloba preparations in clinical
 use (**terpene** trilactones and **flavonol**
glycosides) do not significantly inhibit these human CYPs

in-vitro. However, **flavonol** aglycones, the biflavonol amentoflavone and several other non-glycosidic constituents are significant in-vitro inhibitors of CYP. The clinical importance of these potential inhibitors will depend on their amounts in ginkgo preparations sold to the public, and the extent to which their bioavailability allows them to reach the CYP enzymes in-situ. .COPYRGHT. 2004 The Authors.

CT Medical Descriptors:

enzyme inhibition

drug isolation

in vitro study

liver microsome

IC 50

concentration response

drug mechanism

drug structure

human

controlled study

human cell

article

Drug Descriptors:

*cytochrome P450 isoenzyme: EC, endogenous compound

*Ginkgo biloba extract: AN, drug analysis

*Ginkgo biloba extract: CB, drug combination

*Ginkgo biloba extract: DV, drug development

*Ginkgo biloba extract: EC, endogenous compound

*Ginkgo biloba extract: PD, pharmacology

terpene derivative: AN, drug analysis

terpene derivative: CB, drug combination

terpene derivative: CM, drug comparison

terpene derivative: DV, drug development

terpene derivative: PD, pharmacology

lactone derivative: AN, drug analysis

lactone derivative: CB, drug combination

lactone derivative: CM, drug comparison

lactone derivative: DV, drug development

lactone derivative: PD, pharmacology

ginkgolide A: AN, drug analysis

ginkgolide A: CB, drug combination

ginkgolide A: CM, drug comparison

ginkgolide A: DV, drug development

ginkgolide A: PD, pharmacology

ginkgolide B: AN, drug analysis

ginkgolide B: CB, drug combination

ginkgolide B: CM, drug comparison

ginkgolide B: DV, drug development

ginkgolide B: PD, pharmacology

ginkgolide C: AN, drug analysis

ginkgolide C: CB, drug combination

ginkgolide C: CM, drug comparison

ginkgolide C: DV, drug development

ginkgolide C: PD, pharmacology

ginkgolide J: AN, drug analysis

ginkgolide J: CB, drug combination

ginkgolide J: CM, drug comparison

ginkgolide J: DV, drug development

ginkgolide J: PD, pharmacology

bilobalide: AN, drug analysis

bilobalide: CB, drug combination

bilobalide: CM, drug comparison

bilobalide: DV, drug development

bilobalide: PD, pharmacology
 flavonoid glycoside: AN, drug analysis
 flavonoid glycoside: CB, drug combination
 flavonoid glycoside: CM, drug comparison
 flavonoid glycoside: DV, drug development
 flavonoid glycoside: PD, pharmacology
 kaempferol: AN, drug analysis
 kaempferol: CB, drug combination
 kaempferol: CM, drug comparison
 kaempferol: DV, drug development
 kaempferol: PD, pharmacology
 quercetin: AN, drug analysis
 quercetin: CB, drug combination
 quercetin: CM, drug comparison
 quercetin: DV, drug development
 quercetin: PD, pharmacology
 apigenin: AN, drug analysis
 apigenin: CB, drug combination
 apigenin: CM, drug comparison
 apigenin: DV, drug development
 apigenin: PD, pharmacology
 myricetin: AN, drug analysis
 myricetin: CB, drug combination
 myricetin: CM, drug comparison
 myricetin: DV, drug development
 myricetin: PD, pharmacology
 flavonol derivative: AN, drug analysis
 flavonol derivative: CB, drug combination
 flavonol derivative: CM, drug comparison
 flavonol derivative: DV, drug development
 flavonol derivative: PD, pharmacology
 tamarixetin: AN, drug analysis
 tamarixetin: CB, drug combination
 tamarixetin: CM, drug comparison
 tamarixetin: DV, drug development
 tamarixetin: PD, pharmacology
 4' o methyl apigenin: AN, drug analysis
 4' o methyl apigenin: CB, drug combination
 4' o methyl apigenin: CM, drug comparison
 4' o methyl apigenin: DV, drug development
 4' o methyl apigenin: PD, pharmacology
 kaempferol glycoside: AN, drug analysis
 kaempferol glycoside: CB, drug combination
 kaempferol glycoside: CM, drug comparison
 kaempferol glycoside: DV, drug development
 kaempferol glycoside: PD, pharmacology
 quercetin glycoside: AN, drug analysis
 quercetin glycoside: CB, drug combination
 quercetin glycoside: CM, drug comparison
 quercetin glycoside: DV, drug development
 quercetin glycoside: PD, pharmacology
 luteolin glycoside: AN, drug analysis
 luteolin glycoside: CB, drug combination
 luteolin glycoside: CM, drug comparison
 luteolin glycoside: DV, drug development
 luteolin glycoside: PD, pharmacology
 bilobetin: AN, drug analysis
 bilobetin: CB, drug combination
 bilobetin: CM, drug comparison
 bilobetin: DV, drug development

bilobetin: PD, pharmacology
 cytochrome P450 1A2: EC, endogenous compound
 cytochrome P450 3A: EC, endogenous compound
 amentoflavone: AN, drug analysis
 Drug Descriptors:
 amentoflavone: CB, drug combination
 amentoflavone: CM, drug comparison
 amentoflavone: DV, drug development
 amentoflavone: PD, pharmacology
 sesamin: AN, drug analysis
 sesamin: CB, drug combination
 sesamin: CM, drug comparison
 sesamin: DV, drug development
 sesamin: PD, pharmacology
 flavone derivative: AN, drug analysis
 flavone derivative: CB, drug combination
 flavone derivative: CM, drug comparison
 flavone derivative: DV, drug development
 flavone derivative: PD, pharmacology
 4,4' (1,4 pentadiene 1,5 diyl)diphenol: AN, drug analysis
 4,4' (1,4 pentadiene 1,5 diyl)diphenol: CB, drug combination
 4,4' (1,4 pentadiene 1,5 diyl)diphenol: CM, drug comparison
 4,4' (1,4 pentadiene 1,5 diyl)diphenol: DV, drug development
 4,4' (1,4 pentadiene 1,5 diyl)diphenol: PD, pharmacology
 3 nonadec 8 enylbenzene 1,2 diol: AN, drug analysis
 3 nonadec 8 enylbenzene 1,2 diol: CB, drug combination
 3 nonadec 8 enylbenzene 1,2 diol: CM, drug comparison
 3 nonadec 8 enylbenzene 1,2 diol: DV, drug development
 3 nonadec 8 enylbenzene 1,2 diol: PD, pharmacology
 cytochrome P450 2C9: EC, endogenous compound
 unindexed drug
 unclassified drug

L56 ANSWER 4 OF 18 MEDLINE on STN
 AN 2003605061 MEDLINE
 DN PubMed ID: 14687903
 TI Comparative vasodilating actions among terpenoids and flavonoids contained
 in **Ginkgo** biloba extract.
 AU Nishida Seiichiro; Satoh Hiroyasu
 CS Department of Pharmacology, Division of Crude and Herbal Medicine, Nara
 Medical University, Kashihara, Nara 634-8521, Japan.
 SO Clinica chimica acta; international journal of clinical chemistry, (2004
 Jan) 339 (1-2) 129-33.
 Journal code: 1302422. ISSN: 0009-8981.
 CY Netherlands
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 200403
 ED Entered STN: 20031223
 Last Updated on STN: 20040401
 Entered Medline: 20040331
 AB BACKGROUND: Comparative vasodilating actions of the constituents of
Ginkgo biloba extract (GBE), terpenoids (bilobalide, ginkgolides
 A, B and C) and flavonoids (quercetin and rutin), were examined using rat
 aorta ring strips. METHODS: Cumulative administrations of GBE and its
 constituents were followed with the pretreatment of 5 micromol/l NE.
 RESULTS: GBE at 0.03 to 3 mg/ml had a potent concentration-dependent
 relaxation; by 70 +/- 4.5% (n = 6, P < 0.001) at 3 mg/ml. Terpenoids and
 flavonoids at 0.1 to 100 micromol/l had potent concentration-dependent

relaxation. At 100 micromol/l, bilobalide dilated by 17.6 +/- 3.9% (n = 7, P < 0.05), and ginkgolides A, B and C also caused it to the almost same extent. Quercetin (100 micromol/l) caused a potent vasorelaxation by 49.9 +/- 4.8% (n = 10, P < 0.001). Rutin at 100 micromol/l had weaker vasorelaxation; by 13.7 +/- 3.2% (n = 6, P < 0.01). CONCLUSIONS: All constituents of GBE have the concentration-dependent vasorelaxant effect. The potency of GBE's action was not made simply by addition of those of the constituents. Each constituent itself would contribute to the GBE-induced vasodilation, although the constituents have the complicated interactions with each other.

CT Check Tags: Comparative Study; In Vitro
 Animals
 *Aorta: DE, drug effects
 Aorta: PH, physiology
 Flavonoids: IP, isolation & purification
 *Flavonoids: PD, pharmacology
 *Ginkgo biloba: CH, chemistry
 *Plant Extracts: CH, chemistry
 *Plant Extracts: PD, pharmacology
 Plants, Medicinal: CH, chemistry
 Rats
 Research Support, Non-U.S. Gov't
 Terpenes: IP, isolation & purification
 *Terpenes: PD, pharmacology
 *Vasodilation: DE, drug effects

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AN 2003513823 EMBASE

TI Microphysiometric Measurement of PAF Receptor Responses to Ginkgolides.

AU Krane S.; Kim S.R.; Abrell L.M.; Nakanishi K.

CS K. Nakanishi, Department of Chemistry, Columbia University, New York, NY 10027, United States. kn5@columbia.edu

SO Helvetica Chimica Acta, (2003) Vol. 86, No. 11, pp. 3776-3786.

Refs: 53

ISSN: 0018-019X CODEN: HCACAV

CY Switzerland

DT Journal; Article

FS 027 Biophysics, Bioengineering and Medical Instrumentation

030 Pharmacology

037 Drug Literature Index

LA English

SL English

ED Entered STN: 20040116

Last Updated on STN: 20040116

AB Microphysiometry was used to evaluate the effects of **terpene** trilactone and **flavonoid** constituents of Ginkgo biloba on human platelet-activating-factor receptor (PAFR). Inhibition of the platelet-activating factor response by **terpene** trilactones was confirmed using this functional assay. Ginkgolide B (GB) and 10-O-benzyl-GB showed the strongest inhibition (81 and 93%, resp.) of the PAFR response, while the **flavonoids** rutin, quercetin, and kaempferol showed negligible response inhibition. G. biloba extract mixtures were also tested, and results indicate possible synergistic effects among various components.

CT Medical Descriptors:

*measurement

*microphysiometry

drug potentiation

drug structure

device
 bioassay
 drug isolation
 nonhuman
 controlled study
 animal cell
 article
 priority journal
 Drug Descriptors:
 *thrombocyte activating factor receptor
 *ginkgolide: CM, drug comparison
 *ginkgolide: DV, drug development
 *ginkgolide: PD, pharmacology
 Ginkgo biloba extract: CM, drug comparison
 Ginkgo biloba extract: PD, pharmacology
 terpene trilactone: CM, drug comparison
 terpene trilactone: PD, pharmacology
 flavonoid: CM, drug comparison
 flavonoid: PD, pharmacology
 ginkgolide B: CM, drug comparison
 ginkgolide B: DV, drug development
 ginkgolide B: PD, pharmacology
 10 o benzylginkgolide B: CM, drug comparison
 10 o benzylginkgolide B: DV, drug development
 10 o benzylginkgolide B: PD, pharmacology
 rutoside: CM, drug comparison
 rutoside: PD, pharmacology
 quercetin: CM, drug comparison
 quercetin: PD, pharmacology
 kaempferol: CM, drug comparison
 kaempferol: PD, pharmacology
 thrombocyte activating factor derivative: CM, drug comparison
 thrombocyte activating factor derivative: PD, pharmacology
 apafant: CM, drug comparison
 apafant: PD, pharmacology
 ginkgolide derivative: CM, drug comparison
 ginkgolide derivative: PD, pharmacology
 ginkgolide m: CM, drug comparison
 ginkgolide m: DV, drug development
 ginkgolide m: PD, pharmacology
 bilobalide: CM, drug comparison
 bilobalide: DV, drug development
 bilobalide: PD, pharmacology
 ginkgolide A: CM, drug comparison
 ginkgolide A: DV, drug development
 ginkgolide A: PD, pharmacology
 ginkgolide C: CM, drug comparison
 ginkgolide C: DV, drug development
 ginkgolide C: PD, pharmacology
 ginkgolide J: CM, drug comparison
 ginkgolide J: DV, drug development
 ginkgolide J: PD, pharmacology
 unclassified drug
 bioginkgo
 terbonin forte

L56 ANSWER 6 OF 18 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
 on STN
 AN 2004020356 EMBASE
 TI Potential Toxicities of Herbal Therapies in the Developing Fetus.

AU Jurgens T.M.
 CS Dr. T.M. Jurgens, College of Pharmacy, 2968 College St., Halifax, NS B3H
 3J5, Canada. tjurgens@kilcom1.UCIS.Dal.ca
 SO Birth Defects Research Part B - Developmental and Reproductive Toxicology,
 (2003) Vol. 68, No. 6, pp. 496-498.
 Refs: 27
 ISSN: 1542-9733 CODEN: BDRPCU
 CY United States
 DT Journal; General Review
 FS 010 Obstetrics and Gynecology
 021 Developmental Biology and Teratology
 037 Drug Literature Index
 038 Adverse Reactions Titles
 052 Toxicology
 LA English
 ED Entered STN: 20040220
 Last Updated on STN: 20040220
 CT Medical Descriptors:
 *fetus development
 *pregnancy
 drug utilization
 Echinacea
 Ginkgo biloba
 Hypericum perforatum
 teratogenicity: SI, side effect
 drug effect
 herbal medicine
 prescription
 drug safety
 drug quality
 chemical composition
 birth defect: SI, side effect
 drug information
 drug screening
 ginseng
 virilization: SI, side effect
 drug labeling
 standardization
 drug isolation
 labor induction
 anxiety disorder: DT, drug therapy
 reproductive health
 embryotoxicity: SI, side effect
 neural tube defect: SI, side effect
 mutagenicity
 hormone substitution
 stress
 fatigue
 placenta circulation
 blood oxygenation
 reproductive toxicity: CO, complication
 developmental disorder: CO, complication
 liver vein obstruction: SI, side effect
 sleep disorder: DT, drug therapy
 urinary tract malformation: CO, complication
 urinary tract malformation: CN, congenital disorder
 fetotoxicity: CO, complication
 bone malformation: CO, complication
 bone malformation: CN, congenital disorder
 congenital malformation: CO, complication

congenital malformation: CN, congenital disorder
drug mechanism
skeleton malformation: CN, congenital disorder
skeleton malformation: SI, side effect
human
nonhuman
review
priority journal
Drug Descriptors:
*herbaceous agent: AE, adverse drug reaction
*herbaceous agent: DT, drug therapy
*herbaceous agent: TO, drug toxicity
Echinacea extract
 Ginkgo biloba extract: TO, drug toxicity
 Ginkgo biloba extract: PD, pharmacology
Hypericum perforatum extract: DT, drug therapy
Hypericum perforatum extract: TO, drug toxicity
kava
toxic substance: TO, drug toxicity
plant extract: AE, adverse drug reaction
plant extract: TO, drug toxicity
caulophyllum thalictroides extract: AE, adverse drug reaction
caulophyllum thalictroides extract: TO, drug toxicity
caulophyllumine: AE, adverse drug reaction
caulophyllumine: TO, drug toxicity
cytisine: AE, adverse drug reaction
cytisine: TO, drug toxicity
caulophylline: AE, adverse drug reaction
caulophylline: TO, drug toxicity
ginger extract: DT, drug therapy
ginger extract: TO, drug toxicity
ginger extract: PD, pharmacology
thromboxane
gingerol: TO, drug toxicity
gingerol: PD, pharmacology
shogaol: TO, drug toxicity
shogaol: PD, pharmacology
zingerone
hormone receptor: EC, endogenous compound
testosterone receptor: EC, endogenous compound
ginseng extract: AE, adverse drug reaction
ginseng extract: DT, drug therapy
phytoestrogen: TO, drug toxicity
pyrrolizidine alkaloid: AE, adverse drug reaction
tannin
essential oil
Scutellaria lateriflora extract: AE, adverse drug reaction
Scutellaria lateriflora extract: DT, drug therapy
monoamine oxidase inhibitor
Valeriana officinalis extract: TO, drug toxicity
valepotriate
 flavone derivative
 terpene derivative
unindexed drug
unclassified drug

L56 ANSWER 7 OF 18 MEDLINE on STN
AN 2003074216 MEDLINE
DN PubMed ID: 12585329
TI Development and validation of a gas chromatographic-mass spectrometric

method for simultaneous identification and quantification of marker compounds including bilobalide, ginkgolides and flavonoids in Ginkgo biloba L. extract and pharmaceutical preparations.

AU Deng Fengxia; Zito S William
 CS Department of Pharmaceutical Sciences, College of Pharmacy and Allied Health Professions, St. Johns University, 8000 Utopia Parkway, Jamaica, NY 11439, USA.
 SO Journal of chromatography. A, (2003 Jan 31) 986 (1) 121-7.
 Journal code: 9318488.
 CY Netherlands
 DT Journal; Article; (JOURNAL ARTICLE)
 (VALIDATION STUDIES)
 LA English
 FS Priority Journals
 EM 200307
 ED Entered STN: 20030215
 Last Updated on STN: 20030729
 Entered Medline: 20030728
 AB A gas chromatography-mass spectrometry (GC-MS) method was developed and validated for the simultaneous determination of seven major chemical markers (bilobalide, ginkgolides A, B, C, kaempferol, quercetin and isorhamnetin) in phytopharmaceuticals of Ginkgo biloba L. The intra-day relative standard deviations (RSD) and inter-day RSD's were based on the analysis of the standardized Ginkgo biloba L. extract on the same day and on the following 3 consecutive days. The intra-day RSD's ranged from 1.21% (bilobalide) to 6.20% (kaempferol). The inter-day RSD's ranged from 2.10% (bilobalide) to 10.42% (isorhamnetin). Mean recoveries ranged from a low of 63.0 +/- 5.3% (isorhamnetin) to a maximum of 103.5 +/- 6.0% (ginkgolide A). Calibration curves were linear in ranges between 2.73 and 36.36 microg/ml for the markers. Limits of detection ranged from a low of 0.5 microg/ml (bilobalide) to a high of 2.5 microg/ml (quercetin). The limits of quantitation were a low of 1.1 microg/ml (ginkgolides A, B, C) to a high of 7.5 microg/ml (kaempferol). The method was applied to a standard extract (>6% total terpenoids and >24% total flavonoids) and six ginkgo capsule phytopharmaceuticals.
 CT Calibration
 *Cyclopentanes: AN, analysis
 *Diterpenes
 *Flavonoids: AN, analysis
 *Furans: AN, analysis
 *Ginkgo biloba: CH, chemistry
 *Lactones: AN, analysis
 *Mass Fragmentography: MT, methods
 *Pharmaceutical Preparations: CH, chemistry
 *Plant Extracts: CH, chemistry
 Reproducibility of Results
 Sensitivity and Specificity
 L56 ANSWER 8 OF 18 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
 on STN
 AN 2002386140 EMBASE
 TI Efficient extraction of ginkgolides and bilobalide from Ginkgo biloba leaves.
 AU Lichtblau D.; Berger J.M.; Nakanishi K.
 CS K. Nakanishi, Department of Chemistry, Columbia University, 3000 Broadway, New York, NY 10027, United States. kn5@columbia.edu
 SO Journal of Natural Products, (1 Oct 2002) Vol. 65, No. 10, pp. 1501-1504.
 Refs: 33
 ISSN: 0163-3864 CODEN: JNPRDF
 CY United States

DT Journal; Article
 FS 037 Drug Literature Index
 LA English
 SL English
 ED Entered STN: 20021114
 Last Updated on STN: 20021114

AB An efficient and rapid protocol has been developed for extracting ginkgolides and bilobalide (**terpene** trilactones) from Ginkgo biloba leaves. The procedure takes advantage of the extraordinary stability of the **terpene** trilactone structure to a variety of chemical treatments, especially oxidation, despite the presence of multiple oxygen functions. The protocol involves boiling the aqueous extract of leaves with dilute hydrogen peroxide, extraction with ethyl acetate, washing with basic solutions, and charcoal filtration to yield an off-white powder, **terpene** trilactone content 60-70%. It is likely that the hydrogen peroxide treatment degrades the undesired leaf constituents that lead to intense emulsification during extractions. Further reversed-phase chromatography of the extracts with polymeric resins removes the undesirable ginkgolic acids to amounts less than 10 ppm. The extracts are suited for pure **terpene** trilactone preparation, enrichment of **terpene** trilactone content in nutraceuticals, and preparations of low-flavonoid/**high-terpene** trilactone controls in medicinal studies. The four ginkgolides (ginkgolides A, B, C, J) and bilobalide isolated from the extract were identical in all respects with authentic specimens.

CT Medical Descriptors:
 ***drug isolation**
 *Ginkgo biloba
 plant leaf
 molecular stability
 drug structure
 oxidation
 aqueous solution
 dilution
 drug synthesis
filtration
 reversed phase liquid chromatography
 emulsion
 article
 Drug Descriptors:
 *Ginkgo biloba extract: AN, drug analysis
 *Ginkgo biloba extract: DV, drug development
 *ginkgolide A: AN, drug analysis
 *ginkgolide A: DV, drug development
 *ginkgolide B: AN, drug analysis
 *ginkgolide B: DV, drug development
 *ginkgolide C: AN, drug analysis
 *ginkgolide C: DV, drug development
 *ginkgolide J: AN, drug analysis
 *ginkgolide J: DV, drug development
 *bilobalide: AN, drug analysis
 *bilobalide: DV, drug development
terpene trilactone derivative: AN, drug analysis
terpene trilactone derivative: DV, drug development
 acetic acid ethyl ester
 hydrogen peroxide
 oxygen
 polymer
 resin
 unclassified drug

L56 ANSWER 9 OF 18 MEDLINE on STN
 AN 2002132733 MEDLINE
 DN PubMed ID: 11829655
 TI Extraction of pharmaceutical components from **Ginkgo biloba** leaves using supercritical carbon dioxide.
 AU Yang Chun; Xu Yan-Rong; Yao Wei-Xi
 CS Laboratory of Environmental-Analytical Chemistry and Ecological Toxicology, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing 100085, China.. cyang@nie.edu.sg
 SO Journal of agricultural and food chemistry, (2002 Feb 13) 50 (4) 846-9. Journal code: 0374755. ISSN: 0021-8561.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 200204
 ED Entered STN: 20020301
 Last Updated on STN: 20020424
 Entered Medline: 20020423
 AB **Ginkgo biloba** extract (GBE) has many remarkable pharmacological and clinical effects, and it is the most frequently used product as a phytomedicine in many countries. The combination of primary extraction with 70% ethanol followed by extraction using supercritical carbon dioxide provides an efficient and economical means for obtaining flavonoids and terpenoids from **Ginkgo biloba** leaves. The supercritical fluid extraction (SFE) is affected by pressure, temperature, and the concentration of modifier in the extractant. At the most favorable experimental conditions of 300 MPa, 60 degrees C, and carbon dioxide containing 5% ethanol as modifier, the yield of GBE powder is 2.1% (based on the air-dry weight of **Ginkgo biloba** leaves) compared to a yield of only 1.8% by conventional solvent extraction. The contents of flavonoids and terpenoids in SFE products are 35.9% and 7.3%, respectively, which are significantly higher than the general standards of 24% and 6%, respectively.
 CT Carbon Dioxide
 Chromatography, High Pressure Liquid
 *Chromatography, Supercritical Fluid: MT, methods
 Ethanol
 Flavonoids: AN, analysis
 Flavonoids: IP, isolation & purification
 ***Ginkgo biloba**: CH, chemistry
 *Pharmaceutical Preparations
 *Plant Leaves: CH, chemistry
 Pressure
 Temperature
 Terpenes: AN, analysis
 Terpenes: IP, isolation & purification

L56 ANSWER 10 OF 18 MEDLINE on STN
 AN 2002265698 MEDLINE
 DN PubMed ID: 12005361
 TI Pharmaceutical quality of different **Ginkgo biloba** brands.
 AU Kressmann S; Muller W E; Blume H H
 CS Biocenter Niederursel, Department of Pharmacology, University of Frankfurt, Germany.
 SO Journal of pharmacy and pharmacology, (2002 May) 54 (5) 661-9. Journal code: 0376363. ISSN: 0022-3573.
 CY England: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)

LA English
 FS Priority Journals
 EM 200301
 ED Entered STN: 20020514
 Last Updated on STN: 20030114
 Entered Medline: 20030113

AB **Ginkgo** biloba-containing brands are one of the top sellers within the growing market for herbal remedies in many European countries as well as in the USA. In the consumers' interest, these brands should feature a certain quality and should be transparent in quality claims. In this investigation, a variety of products on the USA market was studied with respect to pharmaceutical quality, such as quantity of constituents and in-vitro dissolution. In terms of the content of active substances, flavone glycosides ranged from 24% to 36% and terpene lactones from 4% to 11%. With ginkgolic acids, there was a very large range, from < 500 ppm to about 90000 ppm. Comparing the dissolution rates of terpene lactones and flavone glycosides within the single products, most were approximately the same. Thus, terpene lactones and flavone glycosides were released from these products and dissolved at the same rate in most cases. Furthermore, most of the products investigated released more than the required 75% of the content of both components within 30 min. However, several products showed clear and relevant differences in dissolution rates to the rest (e.g. < 75% within 30 min or even less than 25% after 60 min in one case, indicating much poorer pharmaceutical quality). Beside the comparability respectively standardisation of the extracts used, the in-vitro dissolution of the relevant constituents should be similar to other drugs to guarantee comparable in-vivo performance of herbal products. An important step in standardising pharmaceutical quality is the pharmacopoeial monograph for **Ginkgo** biloba extract in Germany, standardising the content of pharmacologically relevant substances (flavone glycosides 22-27% and terpenlactones 5-7%, 2.8-3.4% ginkgolides A, B, C and 2.6-3.2% bilobalide thereof). Many of the investigated products, which refer to the German Commission E (of the Federal Institute for Drugs and Medicinal Devices) monograph, are not in accordance with this specification. Thus, they can not be considered to be pharmaceutically equivalent.

CT Chromatography, High Pressure Liquid
 *Flavonoids: AN, analysis
 ***Ginkgo biloba**: CH, chemistry
 *Glycosides: AN, analysis
 Plant Extracts: CH, chemistry
 Quality Control
 Research Support, Non-U.S. Gov't
 *Salicylic Acids: AN, analysis
 Solubility
 *Terpenes: AN, analysis

L56 ANSWER 11 OF 18 MEDLINE on STN
 AN 2002633097 MEDLINE
 DN PubMed ID: 12151066
 TI Simultaneous determination of terpene lactones and flavonoid aglycones in **Ginkgo** biloba by high-performance liquid chromatography with evaporative light scattering detection.
 AU Li Wenkui; Fitzloff John F
 CS Department of Medicinal Chemistry and Pharmacognosy, Program for Collaborative Research in Pharmaceutical Sciences, University of Illinois at Chicago, 833 South Wood Street, 60612-7231, Chicago, IL, USA.
 SO Journal of pharmaceutical and biomedical analysis, (2002 Aug 22) 30 (1) 67-75.
 Journal code: 8309336. ISSN: 0731-7085.

CY England: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 200211
 ED Entered STN: 20021024
 Last Updated on STN: 20021213
 Entered Medline: 20021125
 AB A gradient high performance liquid chromatographic method with evaporative light scattering detection (ELSD) for the simultaneous determination of ginkgolide A, ginkgolide B, ginkgolide C, ginkgolide J, bilobalide, quercetin, kaempferol and isorhamnetin in *Ginkgo biloba* is described. Samples are analyzed by means of a reverse-phase column (Supelco Discovery C-18) using methanol (containing 0.05% TFA) and water (containing 5% methanol and 0.05% TFA) under gradient conditions as the mobile phase over 35 min. The evaporative light scattering detector (ELSD) used, is set at an evaporating temperature of 61 degrees C and compressed air pressure of 2.9 bar. The detection limits (S/N>3) of the compounds tested are 20-35 ng on the column. The exponential linear calibration curves are observed for all the compounds tested with $r(2)$ more than 0.998. The reproducibility of the method was evaluated by analyzing three sets of controls on 3 consecutive days with RSD% and relative errors (RE%) less than 17.26 and 14.67%.
 CT Calibration
 Chromatography, High Pressure Liquid
 *Flavonoids: AN, analysis
 *Ginkgo biloba: CH, chemistry
 Indicators and Reagents
 *Lactones: AN, analysis
 Light
 Reference Standards
 Reproducibility of Results
 Scattering, Radiation
 Solutions
 Spectrophotometry, Ultraviolet
 *Terpenes: AN, analysis
 L56 ANSWER 12 OF 18 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
 on STN
 AN 2001401942 EMBASE
 TI Ginkgo biloba: Potential concern.
 AU Kayne S.
 CS Dr. S. Kayne, School of Pharmacy, University of Strathclyde, Glasgow, United Kingdom. Skayne9665@cs.com
 SO Good Clinical Practice Journal, (2001) Vol. 8, No. 11, pp. 8-10.
 Refs: 29
 ISSN: 1350-0961 CODEN: GCPJFJ
 CY United Kingdom
 DT Journal; Note
 FS 037 Drug Literature Index
 039 Pharmacy
 008 Neurology and Neurosurgery
 030 Pharmacology
 032 Psychiatry
 011 Otorhinolaryngology
 038 Adverse Reactions Titles
 LA English
 ED Entered STN: 20011130
 Last Updated on STN: 20011130
 CT Medical Descriptors:

human
 drug efficacy
 herbal medicine
 drug isolation
 drug dosage form
 diet supplementation
 Chinese medicine
 antioxidant activity
 peripheral circulation
 cerebrovascular disease: DT, drug therapy
 drug antagonism
 drug potentiation
 attention deficit disorder
 drug contraindication
 evidence based medicine
 drug safety
 tinnitus: DT, drug therapy
 headache: SI, side effect
 allergic reaction: SI, side effect
 note

Drug Descriptors:

*Ginkgo biloba extract: PD, pharmacology
 *Ginkgo biloba extract: DV, drug development
 *Ginkgo biloba extract: PR, pharmaceuticals
 *Ginkgo biloba extract: DT, drug therapy
 *Ginkgo biloba extract: DO, drug dose
 *Ginkgo biloba extract: IT, drug interaction
 *Ginkgo biloba extract: CB, drug combination
 *Ginkgo biloba extract: PA, parenteral drug administration
 *Ginkgo biloba extract: AE, adverse drug reaction
 flavonoid glycoside: PD, pharmacology
 flavonoid glycoside: DV, drug development
 flavonoid glycoside: PR, pharmaceuticals
 flavonoid glycoside: DT, drug therapy
 diterpene: PD, pharmacology
 diterpene: DV, drug development
 diterpene: PR, pharmaceuticals
 diterpene: DT, drug therapy
 lactone derivative: PD, pharmacology
 lactone derivative: DV, drug development
 lactone derivative: PR, pharmaceuticals
 lactone derivative: DT, drug therapy
 ginkgolide derivative: PD, pharmacology
 ginkgolide derivative: DV, drug development
 ginkgolide derivative: PR, pharmaceuticals
 ginkgolide derivative: DT, drug therapy
 anticoagulant agent: CB, drug combination
 anticoagulant agent: IT, drug interaction
 insulin: CB, drug combination
 insulin: IT, drug interaction
 monoamine oxidase inhibitor: CB, drug combination
 monoamine oxidase inhibitor: IT, drug interaction
 thiazide diuretic agent: CB, drug combination
 thiazide diuretic agent: IT, drug interaction
 trazodone: CB, drug combination
 trazodone: IT, drug interaction
 warfarin: CB, drug combination
 warfarin: IT, drug interaction
 acetylsalicylic acid: CB, drug combination
 acetylsalicylic acid: IT, drug interaction

ginseng extract: IT, drug interaction
ginseng extract: CB, drug combination
ginseng extract: DT, drug therapy

L56 ANSWER 13 OF 18 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
AN 1998253042 EMBASE
TI Ginkgo biloba L..
AU Van Beek T.A.; Bombardelli E.; Morazzoni P.
CS P. Morazzoni, Indena S.p.A., Scientific Department, Viale Ortles 12, 20139
Milan, Italy
SO Fitoterapia, (1998) Vol. 69, No. 3, pp. 195-244.
Refs: 238
ISSN: 0367-326X CODEN: FTRPAE
CY Italy
DT Journal; General Review
FS 008 Neurology and Neurosurgery
018 Cardiovascular Diseases and Cardiovascular Surgery
030 Pharmacology
037 Drug Literature Index
038 Adverse Reactions Titles
LA English
SL English
ED Entered STN: 19980820
Last Updated on STN: 19980820
AB The chemistry, analysis, pharmacology and clinical applications of
extracts of the maidenhair tree (G. biloba) are reviewed. This
botanically unique tree contains some unusual secondary metabolites, among
others a number of highly oxidised **terpene** trilactones
(ginkgolides, bilobalide) which, together with some **flavonoids**,
are considered to be responsible for the pharmacological activities of
standardized leaf extracts: vaso- and tissue-protective action,
cognition-enhancing and antiageing activity, including stress-alleviating
and neuroprotective/neurotrophic effects. All these properties support
the therapeutic applications against cerebral insufficiency and impaired
peripheral blood circulation.
CT Medical Descriptors:
*ginkgo biloba
*brain dysfunction: DT, drug therapy
*peripheral occlusive artery disease: DT, drug therapy
*alzheimer disease: DT, drug therapy
*cognitive defect: CO, complication
*cognitive defect: DT, drug therapy.
*herbal medicine
 drug isolation
drug effect
cognition
aging
brain circulation
antioxidant activity
treatment indication
gastrointestinal symptom: SI, side effect
skin manifestation: SI, side effect
human
nonhuman
male
female
major clinical study
clinical trial
double blind procedure

crossover procedure
 multicenter study
 controlled study
 animal cell
 aged
 adult
 review

Drug Descriptors:

*bilobalide: AE, adverse drug reaction
 *bilobalide: CT, clinical trial
 *bilobalide: DV, drug development
 *bilobalide: DO, drug dose
 *bilobalide: DT, drug therapy
 *bilobalide: PR, pharmaceuticals
 *bilobalide: PK, pharmacokinetics
 *bilobalide: PD, pharmacology
 *ginkgolide a: AE, adverse drug reaction
 *ginkgolide a: CT, clinical trial
 *ginkgolide a: DV, drug development
 *ginkgolide a: DO, drug dose
 *ginkgolide a: DT, drug therapy
 *ginkgolide a: PR, pharmaceuticals
 *ginkgolide a: PK, pharmacokinetics
 *ginkgolide a: PD, pharmacology
 *ginkgolide b: AE, adverse drug reaction
 *ginkgolide b: CT, clinical trial
 *ginkgolide b: DV, drug development
 *ginkgolide b: DO, drug dose
 *ginkgolide b: DT, drug therapy
 *ginkgolide b: PR, pharmaceuticals
 *ginkgolide b: PK, pharmacokinetics
 *ginkgolide b: PD, pharmacology
 *ginkgo biloba extract
 medicinal plant
 plant extract
 nitric oxide: EC, endogenous compound
 endothelium derived relaxing factor: EC, endogenous compound
 alpha tocopherol: CM, drug comparison
 pentoxifylline: CM, drug comparison
 antioxidant: AN, drug analysis
 antioxidant: CM, drug comparison
 antioxidant: DV, drug development
 antioxidant: DO, drug dose
 antioxidant: PD, pharmacology
 thrombocyte activating factor antagonist: AN, drug analysis
 thrombocyte activating factor antagonist: DV, drug development
 thrombocyte activating factor antagonist: DO, drug dose
 thrombocyte activating factor antagonist: PD, pharmacology

- L56 ANSWER 14 OF 18 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
 on STN
 AN 95097770 EMBASE
 DN 1995097770
 TI Comparative antilipoperoxidant, antinecrotic and scavenging properties of
terpenes and biflavones from Ginkgo and some **flavonoids**.
 AU Joyeux M.; Lobstein A.; Anton R.; Mortier F.
 CS Laboratoire de Pharmacognosie, Faculte Sciences Pharmaceut./Biolog., 5 Rue
 Albert Lebrun, F-54001 Nancy Cedex, France
 SO Planta Medica, (1995) Vol. 61, No. 2, pp. 126-129.
 ISSN: 0032-0943 CODEN: PLMEAA

CY Germany
 DT Journal; Article
 FS 005 General Pathology and Pathological Anatomy
 029 Clinical Biochemistry
 048 Gastroenterology
 030 Pharmacology
 037 Drug Literature Index
 LA English
 SL English
 ED Entered STN: 950503
 Last Updated on STN: 950503
 AB Ginkgo biloba extract is known to be efficient in diseases associated with free radical generation. This study compares the in vitro effect of some constituents of Ginkgo against lipid peroxidation and cell necrosis of isolated rat hepatocytes, and against superoxide anion which is generally implicated in cell damages.
 CT Medical Descriptors:
 *lipid peroxidation
 *liver necrosis
 animal cell
 animal experiment
 article
 cell damage
 controlled study
 drug isolation
 male
 nonhuman
 rat
 Drug Descriptors:
 *biflavonoid: DV, drug development
 *biflavonoid: CM, drug comparison
 *biflavonoid: PD, pharmacology
 *flavonoid: DV, drug development
 *flavonoid: CM, drug comparison
 *flavonoid: PD, pharmacology
 *ginkgo biloba extract: CM, drug comparison
 *ginkgo biloba extract: PD, pharmacology
 *scavenger: DV, drug development
 *scavenger: PD, pharmacology
 *scavenger: CM, drug comparison
 *terpene derivative: DV, drug development
 *terpene derivative: CM, drug comparison
 *terpene derivative: PD, pharmacology
 acacetin: PD, pharmacology
 acacetin: DV, drug development
 acacetin: CM, drug comparison
 amentoflavone: PD, pharmacology
 amentoflavone: DV, drug development
 amentoflavone: CM, drug comparison
 apigenin: PD, pharmacology
 apigenin: CM, drug comparison
 apigenin: DV, drug development
 bilobalide: CM, drug comparison
 bilobalide: DV, drug development
 bilobalide: PD, pharmacology
 bilobetin: PD, pharmacology
 bilobetin: CM, drug comparison
 bilobetin: DV, drug development
 chrysin: CM, drug comparison
 chrysin: DV, drug development

chrysin: PD, pharmacology
 fisetin: PD, pharmacology
 fisetin: CM, drug comparison
 fisetin: DV, drug development
 flavone derivative: PD, pharmacology
 flavone derivative: CM, drug comparison
 flavone derivative: DV, drug development
 free radical: EC, endogenous compound
 ginkgetin: PD, pharmacology
 ginkgetin: CM, drug comparison
 ginkgetin: DV, drug development
 ginkgolide: DV, drug development
 ginkgolide: CM, drug comparison
 ginkgolide: PD, pharmacology
 ginkgolide a: DV, drug development
 ginkgolide a: CM, drug comparison
 ginkgolide a: PD, pharmacology
 ginkgolide b: PD, pharmacology
 ginkgolide b: DV, drug development
 ginkgolide b: CM, drug comparison
 ginkgolide c: DV, drug development
 ginkgolide c: CM, drug comparison
 ginkgolide c: PD, pharmacology
 hinokiflavone: PD, pharmacology
 hinokiflavone: DV, drug development
 hinokiflavone: CM, drug comparison
 isoginkgetin: PD, pharmacology
 isoginkgetin: CM, drug comparison
 isoginkgetin: DV, drug development
 kaempferol: DV, drug development
 kaempferol: PD, pharmacology
 kaempferol: CM, drug comparison
 luteolin: CM, drug comparison
 luteolin: PD, pharmacology
 luteolin: DV, drug development
 myricetin: DV, drug development
 myricetin: CM, drug comparison
 myricetin: PD, pharmacology
 quercetin: DV, drug development
 quercetin: CM, drug comparison
 quercetin: PD, pharmacology
 rutoside: CM, drug comparison
 rutoside: DV, drug development
 rutoside: PD, pharmacology
 sciadopitysin: PD, pharmacology
 sciadopitysin: CM, drug comparison
 sciadopitysin: DV, drug development
 superoxide: EC, endogenous compound
 taxifolin: PD, pharmacology
 taxifolin: CM, drug comparison
 taxifolin: DV, drug development
 tert butyl hydroperoxide: TO, drug toxicity
 unclassified drug

L56	ANSWER 15 OF 18	MEDLINE on STN	DUPLICATE 1
AN	93181480	MEDLINE	
DN	PubMed ID: 8441775		
TI	Quality of Ginkgo preparations.		
AU	Sticher O		
CS	Department of Pharmacy, Federal Institute of Technology (ETH) Zurich,		

Switzerland.

SO Planta medica, (1993 Feb) 59 (1) 2-11. Ref: 25
Journal code: 0066751. ISSN: 0032-0943.

CY GERMANY: Germany, Federal Republic of

DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)

LA English

FS Priority Journals

EM 199303

ED Entered STN: 19930416
Last Updated on STN: 19930416
Entered Medline: 19930331

AB A survey of known and of recently isolated constituents from **Ginkgo** leaves is given. The structures of flavonoids and terpene lactones which are considered to be the active compounds as well as their qualitative and quantitative determination in **Ginkgo** leaves and phytomedicines are presented. In the case of flavonoid analysis three selective methods worked out in our laboratories are described. The quality control of terpene lactones is discussed on the basis of a recently published paper. Finally, the standardization methods used for the quality control of **Ginkgo** preparations as well as the question as to whether or not phytomedicine generics--so called "phytogenics"--exist, is discussed.

CT Carbohydrate Sequence
Flavonoids: CH, chemistry
Flavonoids: IP, isolation & purification
Glycosides: CH, chemistry
Glycosides: IP, isolation & purification
Lactones: CH, chemistry
Lactones: IP, isolation & purification
Molecular Sequence Data
*Plants, Medicinal
Plants, Medicinal: CH, chemistry
Quality Control
Research Support, Non-U.S. Gov't
Terpenes: CH, chemistry
Terpenes: IP, isolation & purification

L56 ANSWER 16 OF 18 MEDLINE on STN

AN 93222252 MEDLINE

DN PubMed ID: 1298366

TI Rapid liquid chromatography of terpenes in **Ginkgo biloba** L. extracts and products.

AU Pietta P; Mauri P; Rava A

CS Dipartimento di Scienze e Tecnologie Biomediche, Sezione di Chimica Organica Via Celoria, Milano, Italy.

SO Journal of pharmaceutical and biomedical analysis, (1992 Oct-Dec) 10 (10-12) 1077-9.
Journal code: 8309336. ISSN: 0731-7085.

CY ENGLAND: United Kingdom

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199305

ED Entered STN: 19930521
Last Updated on STN: 19930521
Entered Medline: 19930507

CT *Chromatography, High Pressure Liquid
Flavonoids: IP, isolation & purification

Glycosides: IP, isolation & purification
 *Plant Extracts: CH, chemistry
 *Terpenes: AN, analysis

- L56 ANSWER 17 OF 18 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
 on STN
 AN 93022215 EMBASE
 DN 1993022215
 TI [The analysis and preparation of Ginkgo biloba].
 GINKGO BILOBA - ANALYTIK UND ZUBEREITUNGSFORMEN.
 AU Sticher O.
 CS Departement Pharmazie, Eidgenossische Technische Hochsch., Zurich,
 Switzerland
 SO Pharmazie in Unserer Zeit, (1992) Vol. 21, No. 6, pp. 253-265.
 ISSN: 0048-3664 CODEN: PHUZBI
 CY Germany
 DT Journal; General Review
 FS 037 Drug Literature Index
 LA German
 ED Entered STN: 930221
 Last Updated on STN: 930221
 CT Medical Descriptors:
 *phytotherapy
 analytic method
 chromatography
 drug control
 drug determination
 drug isolation
 high performance liquid chromatography
 quality control
 review
 standardization
 Drug Descriptors:
 *flavonoid: AN, drug analysis
 *ginkgo biloba extract: PR, pharmaceuticals
 *ginkgo biloba extract: AN, drug analysis
 *terpene derivative: AN, drug analysis
 craton
 gincosan
 ginkobil
 valverde
 unclassified drug
- L56 ANSWER 18 OF 18 MEDLINE on STN
 AN 87067160 MEDLINE
 DN PubMed ID: 2947081
 TI [Preparation and definition of Ginkgo biloba extract].
 Preparation et definition de l'extrait de Ginkgo biloba.
 AU Drieu K
 SO Presse medicale (Paris, France : 1983), (1986 Sep 25) 15 (31) 1455-7.
 Journal code: 8302490. ISSN: 0755-4982.
 CY France
 DT Journal; Article; (JOURNAL ARTICLE)
 LA French
 FS Priority Journals
 EM 198701
 ED Entered STN: 19900302
 Last Updated on STN: 19900302
 Entered Medline: 19870106
 AB Ginkgo biloba extract is a well-defined and complex product

prepared from green leaves of *Ginkgo biloba*. The leaves are harvested from trees growing in plantations in South Korea, Japan and France. The mode of culture, harvesting and extraction are perfectly standardized and controlled. Analysis of *Ginkgo biloba* extract makes it possible to confirm that undesirable substances have been eliminated and to measure the amount of active principles. The extract contains flavonoid substances, such as the *Ginkgo*-flavone glycosides and terpenoids which are characteristic of *Ginkgo* and have a unique structure (ginkgolides, bilobalide).

CT Chemistry
 English Abstract
 Flavonoids: AN, analysis
 Plant Extracts: AN, analysis
 Plant Extracts: IP, isolation & purification
 *Plants, Medicinal
 Terpenes: AN, analysis
 *Trees

=> => □

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L2	588	SEA	FILE=NAPRALERT	ABB=ON	PLU=ON	(EXTRACT OR EXT?) AND L1
L3	1731	SEA	FILE=NAPRALERT	ABB=ON	PLU=ON	TERPEN?
L4	6793	SEA	FILE=NAPRALERT	ABB=ON	PLU=ON	LACTON?
L5	20897	SEA	FILE=NAPRALERT	ABB=ON	PLU=ON	FLAVON?
L10	14	SEA	FILE=NAPRALERT	ABB=ON	PLU=ON	L2 AND (L3 OR L4)
L11	60	SEA	FILE=NAPRALERT	ABB=ON	PLU=ON	L5 AND L2
L12	6	SEA	FILE=NAPRALERT	ABB=ON	PLU=ON	L11 AND L10

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=> d bib it 1

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 ENTER DISPLAY FORMAT (QRD):end

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L12 ANSWER 1 OF 6 NAPRALERT COPYRIGHT (C) 2005 BD. TRUSTEES, U. IL. on STN
AN 2002:4928 NAPRALERT
DN L10765
TI THE **EXTRACT** OF **GINKGO BILOBA**. A NEW FIELD
FOR THE APPLICATION OF **FLAVONOIDS** AND **TERPENOID**
AU URATA G; IIJIMA N
CS NATIONAL INST PUBLIC HEALTH, TOKYO JAPAN
SO NIPPON KASEI GAKKAISHI (2000) 51 (8) S. 735-746.
DT Journal
LA ENGLISH
OS CA 134:231371
CHC 400

L12 ANSWER 2 OF 6 NAPRALERT COPYRIGHT (C) 2005 BD. TRUSTEES, U. IL. on STN
AN 2002:37 NAPRALERT
DN E00836
TI THE EFFICACY OF GINSENG. A SYSTEMATIC REVIEW OF RANDOMISED CLINICAL TRIALS
AU VOGLER B K; PITTLER M H; ERNST E
CS DEPT COMPLEMENT MED, SCH POSTGRAD MED HEALTH SCI, UNIV EXETER, EXETER
ENGLAND
SO EUR J CLIN PHARMACOL (1999) 55 (8) p. 567-575.
DT (Research paper)
LA ENGLISH
CHC 10792

L12 ANSWER 3 OF 6 NAPRALERT COPYRIGHT (C) 2005 BD. TRUSTEES, U. IL. on STN
AN 2001:5156 NAPRALERT
DN L13889
TI COMPLEMENTARY CARDIOPROTECTIVE EFFECTS OF **FLAVONOID** METABOLITES
AND **TERPENOID** CONSTITUENTS OF **GINKGO BILOBA**
EXTRACT (EGB 761) DURING ISCHEMIA AND REPERFUSION
AU LIEBGOTT T; MIOLLAN M; BERCHADSKY Y; DRIEU K; CULCASI M; PIETRI S
CS UNIV MARSEILLE, MARSEILLE FRANCE
SO BASIC RES CARDIOL (2000) 95 (5) p. 368-377.
DT (Research paper)
LA ENGLISH
CHC 1536

L12 ANSWER 4 OF 6 NAPRALERT COPYRIGHT (C) 2005 BD. TRUSTEES, U. IL. on STN
AN 2001:4161 NAPRALERT
DN L13324
TI PROTECTIVE EFFECTS OF **GINKGO BILOBA EXTRACT**
ON GASTRIC MUCOSA
AU WANG Q; ZHAO W Z H; MA C H G
CS DEPT PHARMACOLOGY, ANHUI MED UNIV, HEFEI 230032 CHINA
SO YAO HSUEH HSUEH PAO (2000) 21 (12) p. 1153-1156.
DT (Research paper)
LA ENGLISH
CHC 1108

L12 ANSWER 5 OF 6 NAPRALERT COPYRIGHT (C) 2005 BD. TRUSTEES, U. IL. on STN
AN 1998:6651 NAPRALERT
DN J16912
TI **TERPENE**-FREE AND **FLAVONOID** GLYCOSIDE-RICH